THE GRADUATE SCHOOL

We recommend that the dissertation prepared under our supervision by

Peter A. Kopp

entitled

A History of Hoptopia: The Local and Global Roots of a Willamette Valley Specialty Crop

be accepted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

William D. Rowley, Advisor

C. Elizabeth Raymond, Committee Member

Alicia Barber, Committee Member

Scott Slovic, Committee Member

Paul F. Starrs, Graduate School Representative

Marsha H. Read, Ph. D., Dean, Graduate School

May, 2012
A History of Hoptopia: The Local and Global Roots of a Willamette Valley Specialty Crop

Among the grain fields and orchards of Oregon’s Willamette Valley grows a distinctive plant called hops. The specialty crop is non-native, but local farming communities have welcomed it for nearly 150 years. In this rural agricultural region, the climbing plant stands alone for its vigorous vertical growth on wire-trellis supports and bright green cones that span the length of its vines. Passersby cannot mistake the hop’s unique physical presence. In the past thirty years, hops have also become increasingly visible in surrounding urban centers. Once a topic reserved mostly for brewers, a craft beer revolution and local foods movement have inspired Portlanders and residents of other nearby metropolitan areas to appreciate the plant. Advertisers near and far have also picked up on this intrigue and made the hop evermore visible on beer bottle labels and in television commercials.

The widespread interest in hops is not new. It has just changed over time. Unbeknownst to many of the Pacific Northwest’s beer connoisseurs, not to mention the general American public, the Willamette Valley was once at the global center of hop production. In the first half of the twentieth century, Oregon produced forty percent of the American hop crop, contributing millions of hops to the world’s marketplace. Historically, hops have been Oregon’s most important specialty crop and their presence
has provided environmental and cultural connections between rural farmers and urban centers, and the Willamette Valley and the rest of world.

This dissertation addresses a historiographical void on specialty crops in the American West and makes connections to worldwide exchanges of knowledge and commodities. The project builds upon scholarship such as William Cronon’s *Nature’s Metropolis* (1991), William G. Robbin’s *Landscapes of Promise* (1997), David Vaught’s *Cultivating California* (1999), and Judith A. Carney’s *In the Shadow of Slavery* (2011) to explain the environmental and cultural reasons why Oregon became a world center of hop production. While plant diseases ultimately limited production by the mid-twentieth century, a well-established crop science program at Oregon State University and a burgeoning local craft beer movement has kept Oregon at the center of the hop world to the present day. The narrative also explains how a diverse multicultural labor force hand-picked crops prior to mechanization of harvests in the 1950s. American Indian, Euroamerican, Chinese, Japanese, Filipino, African American, and Latin American peoples found multiple meanings in the yearly harvest. By exploring these histories of agriculture, science, labor, and business, this work argues that despite being non-native, hops evolved with Oregon culture to become a critical part of regional identity. Within that framework, the history of the crop frames a “sense of place,” or “sense of history,” from local Oregon soils to people and materials across the globe.
Acknowledgements

Over the three years that this project unfolded, I became increasingly aware that collaboration rests at the heart of historical scholarship. My research and writing developed in tandem with the development of dozens of new personal relationships and fortifying older ones. I am grateful for the opportunities and resources made available to me at the University of Nevada, and the friendships that have resulted from my doctoral work. I have enjoyed the process.

First and foremost, I am indebted to my advisor and friend William D. Rowley, Professor and Griffen Chair of Nevada and the West in the Department of History at the University of Nevada, Reno. Bill welcomed me to the program in August of 2006 and offered me opportunities across the academic spectrum and in the community. His experiences and insight fundamentally improved my thinking, writing, and teaching. His generosity and humor also improved life in graduate school.

I am also extremely grateful to my dissertation committee that included Elizabeth Raymond, Alicia Barber, Scott Slovic, and Paul Starrs, all who offered excellent ideas and criticism from the beginning. Many of their ideas shaped the chapters ahead and the book manuscript that I hope to create from this dissertation. In the History and English departments at Nevada, Mike Branch, Scott Casper, Linda Curcio-Nagy, and Andrew Nolan also helped shape my historiographical base and approaches to writing history in transnational and interdisciplinary contexts. I am also appreciative of other faculty at UNR for their scholarly and professional insight. Dennis Dworkin, Neal Ferguson,
Lawrence Hatter, Martha Hildreth, Meredith Oda, Ned Schoolman, Hugh Shapiro, Tom Smith, Barbara Walker, and Erica Westhead were all supportive of this project and my career. So too was Jennifer Baryol, our departmental coordinator. Of course, my graduate student compadres also helped to sharpen my intellect and scholarship while also providing comic relief. I am pleased to have undertaken interdisciplinary work that introduced me to Jim Bishop, Paul Boone, Erin Cummings, Jonathan Cummins, Amy Ghilieri, Travis Lacy, Kyhl Lyndgaard, Andrew McGregor, Nick Plunkey, Ryan Powell, Travis Ross, and Edan Strekal.

Librarians and archivists at many institutions were generous with their time and resources. At the University of Nevada, I owe many thanks to Pat Ragains and Mark Lucas. I am also indebted to Geoff Wexler and Shawna Gandy at the Oregon Historical Society, Joy Werlink at the Washington State Historical Society, Larry Landis at the University Archives of Oregon State University, John Henning of the Crop Science Department at Oregon State University, Doug Erickson and Jeremy Skinner of the Watzek Library at Lewis and Clark College, Mary Gallagher at the Benton County Historical Society, Peggy Schorsch at the Independence Heritage Museum, Patrick Harris at the Aurora Colony Museum, and the librarians at Portland State University, Multnomah County Library, Marion County Historical Society, and the Polk County Historical Society. Additionally, through connections with Oregon State University and the Washington State Historical Society, I befriended Alfred Haunold and Dennis Larson, two important individuals who made this project possible through their willingness to share their own research and to look over my chapters. I could not have produced this manuscript without their support.
Much of the fun and insight that resulted from this project occurred from meeting the people who have closely lived the history of *Hoptopia* and shared their stories with me. I offer many thanks to Michelle Palacios and Nancy Frketich at the Oregon Hop Commission for providing access to institutional records and access to OHC meetings and members. For their roles in brewing, growing hops, and storytelling, I am indebted to John Annen, Maureen Coleman and her family, Christian Ettinger, Gayle Goshcie, Herman Goschie, Vernice Goschie, Al Haunold, Art Larrance, Karl Ockert and all of their family and friends who also spoke with me at various points of this project. I am also grateful to Eliza Canty-Jones, John Foyston, Tim Hill, and Tim and Brian McMenamin for inviting me to talk about the Willamette Valley hop industry at the twenty-five year celebration of Oregon’s microbrew law in the late summer of 2010, a moment that helped me realize that people were not only very interested in this project but embraced the sense of place and “locatedness” that I explore in this dissertation.

On a bittersweet note, I gave that talk one week after emceeing the celebration of life ceremony for my father, Jim Kopp, who passed away earlier that August. My dad was not only the source of my interest in history and sense of place, but he was also my sounding board and editing partner for the previous decade and a half. Before he passed on, he read and commented on much of the following manuscript. He also offered me the title “Hoptopia.” I am grateful to be his son and a scholar with similar interests. And it is to him and to my mother Sue, sister Lucy, brother-in-law Ryan, brother Joe, and my wife Sarah Rose that I dedicate this manuscript. I have survived and thrived because of their patience, generosity, and support.
# TABLE OF CONTENTS

INTRODUCTION  
*Beervana* Beginnings and a *Hoptopia* Hypothesis  
1

CHAPTER ONE  
“Hop Fever” in the Willamette Valley:  
Environmental and Agricultural Foundations,  
1865 – 1905  
17

CHAPTER TWO  
“Hop Capital of the World”:  
Business, Politics, and Expansion in the Face of Prohibition and War,  
1905 – 1943  
63

CHAPTER THREE  
“Hop Picking Time”:  
Labor and Culture in the Willamette Valley Hopyards,  
1870 – 1945  
118

CHAPTER FOUR  
After the Hop Rush:  
Big Beer, Small Farms, and the Rise of the American Hybrid,  
1945 – 2000  
172

CONCLUSION  
Oregon’s *Hoptopia* Elaborated  
228

BIBLIOGRAPHY  
241
Introduction

*Beervana Beginnings and a Hoptopia Hypothesis*

The Columbia River Brewery’s opening reception in Northwest Portland exceeded expectations. On this day after Thanksgiving, November 23, 1984, an impressive crowd gathered for complimentary pints of master brewer Karl Ockert’s first batch of ales. Following decades of macro-brewed lagers from the giants of the industry—Anheuser-Busch, Miller-Pabst, and Coors—the party celebrated the revival of a craft brewing culture that had ceased during state and national prohibition of the 1910s to the early 1930s. Ockert’s beers furnished refreshing flavors and aromas to the region’s residents. Excitement loomed.

Little did the beer-drinking clientele know that the Columbia River Brewery nearly went out of business that night. Ockert and the brewery’s financial backers, Dick and Nancy Ponzi, were unprepared for the amount of beer they gave away for free. A representative of neighboring Blitz-Weinhard Brewery (purchased by Pabst a decade prior), who had joined the festivities for business and pleasure, recognized the conundrum surrounding his potential rival. He assisted in the drinking fete, and, as Ockert remembers, enthusiastically called upon the crowds to quaff more than their share of suds. While he acted mostly tongue-in-cheek, the results nearly spelled a quick end to the brewery. After starting with eighteen kegs at the beginning of the evening, there
remained just two in the morning. Luckily, those were just enough to keep the business operating while Ockert set out to make more beer.¹

By staving off ruin that night, the Columbia River Brewery helped define a new generation of American beer producers and consumers. The brewery’s opening extravaganza, now part of the industry’s nostalgic lore, helped usher in a resurgence of craft brewing culture in the United States. Initially this was a California-centric revival associated with San Francisco’s Anchor Steam Brewing and Chico’s Sierra Nevada Brewing in the 1970s and early 1980s. But Portland breweries quickly entered the picture. After his first year in business, Ockert alone brewed over 4,000 gallons of beer for Columbia River Brewing. The next year, the brewery—by then having changed its name to the now familiar BridgePort Brewing Company—produced over 30,000 gallons. Success continued with the opening of a brewpub in 1986 and the incorporation of bottling for retail sales. By the end of the decade, the brewery produced 120,000 gallons of beer per year and expanded its distribution considerably.²


At the same time that BridgePort Brewing expanded, a group of brewers and beer enthusiasts successfully lobbied for a change in Oregon state law to allow the widespread sale of craft beer. The “microbrew law,” an offshoot of the Carter-era Cranston Bill (1979) that liberalized homebrewing, allowed small brewers to sell their beers in establishments that also served food. Among the activists included several partnerships in the midst of starting their own alehouses and brewpubs. Within a two-year period, Mike and Brian McMenamin opened their first of many McMenamin breweries; Kurt and Rob Widmer founded Widmer Brothers Brewing; Art Larrance and Fred Bowman established the Portland Brewing Company. Like Ockert and the Ponzis, this first generation of craft brewers and entrepreneurs served rich beers with quality ingredients unseen in the region for generations save for homebrews or specialty, hard-to-find, European imports. A larger movement gained momentum with new breweries opening every year. The new beer culture inspired a fervent local following and the breweries’ beers started winning international awards. By 1991, Oregon’s internationally acclaimed beer writer Fred Eckhardt dubbed his state the “craft beer capital of the world.”

When asked how one defines the “craft beer capital of the world,” Christian Ettinger of the newer Hopworks Urban Brewery in Portland (opened in 2008) confidently noted, “The statistics speak for themselves.” According to the Oregon Brewers’ Guild in 2010, Oregon houses sixty-three individual breweries with nearly ninety different

---

3 John Foyston, “Tales of the Pioneers.”


5 Christian Ettinger, interview by author, August 20, 2009.
facilities. Portland alone hosts forty individual breweries in its metropolitan area, the most of any city on the globe. Other numbers also justify Oregon’s claim as a craft beer capital. While the national average of craft beer consumption hovers around five percent, Portlanders consume over forty percent of their draft beer from Oregon brewpubs and restaurants. They also purchase craft beer at a ten percent rate at grocery stores and other outlets. Both of those figures are well above national averages. In recent years, all of these reasons inspired beer lovers to designate a new title for the Portland metropolitan area. They decided that this region was not just the “craft beer capital of the world,” but something far more sublime. The residents dubbed their city *Beervana.*

**From *Beervana* to *Hoptopia***

In the craft beer revival, the brewpub became synonymous with Portland’s urban culture. Hand crafted pints helped shape the character of a city with an above average number of foodies who are particularly conscious about local food production. Many of the area restaurants pride themselves in utilizing local farms to craft menus based on seasonal produce. A growing throng of farmer’s markets and Community Supported Agriculture (CSA) programs also contribute to the city’s food-conscious, and locavore, identity. The attention to local food invokes not only a feeling of responsible consumption, but also a sense of community related to production. The same applies to local beer production and consumption, perhaps on an even greater scale. Local consumers take pride that they can imbibe a lager or ale produced within blocks of their

---

6 Oregon Brewers Guild, “Beer Facts,” *On Tap* (blog), accessed September 21, 2009, oregonbeer.org. Also, see the popular blog: beervana.blogspot.com that includes links to dozens of local and national websites on the same subject.
residence. Local beer production utilizes a substantial portion of ingredients from farms within the region, a claim that most brewers across the nation cannot make. It offers local residents a sense of community and a sense of pride in the unique consuming experience of the Bridge City and relationship to its surrounding hinterlands.

In 2008, the BridgePort Brewing Company launched a website (bridgeportbrew.com) to highlight the broader production of the craft beer economy in Portland and its connection to nearby agricultural settings. The site offers visitors an opportunity to embark on a self-guided three-dimensional tour—complete with iconic images of Portland—that acquaints them with the BridgePort ale house, the brewers, and, of course, their beer. Amidst the tour, the website also offers a sojourn to the surrounding agricultural landscape. There, the text suggests:

Our quest for the metaphoric ‘land of milk and honey’ is clearly mislabeled! For BridgePort Brewing Company, the quest was rewarded in America’s Pacific Northwest, a land where Mother Nature thoughtfully provided everything a master brewer needs to make a world class beer.\(^7\)

Mother Nature, in this case, provided a fertile environment for the cultivation of the barley, wheat, and hops that, along with water and yeast, make up the central ingredients for beer production. The beverage intimately linked the surrounding soil, climate, and people who grow and harvest the crop with those who utilize it.\(^8\)

---


BridgePort’s effort to connect urban consumption with the productivity of nearby rural agriculture strikes a familiar chord in the lexicon of the nation’s agrarian myth, connecting the welfare of the city with the prosperity of the countryside. By linking rural environments and agricultural production (grain and hops) to the success of urban production (beer) for the consumer, the website asks the public to consider Portland craft brewing culture in a larger place-based framework. The company suggests that their customers should not overlook the connection of local agriculture to regional beer-making, and that the regional grain and hop crops shape a localized production identity. With Portland and the Willamette Valley’s sensitivity to the local food movement and sustainability, the discussion acts as an important marketing tool and an imprint of an integrated urban and rural identity.

While grain and water gathered from the region are essential to Portland’s beer-brewing culture, another ingredient looms large. Hops are the lynchpin of the modern brewer’s trade, providing not only distinct flavors and aromas in beer, but also acting as a natural preservative and head stabilizer. The Pacific Northwest, for all of its varied agriculture, is a virtual garden spot for hop cultivation. This “far corner” of the nation is the only region that currently produces a domestic commercial hop supply. Competing yearly with Germany as the world’s leader, Oregon, Washington, and Idaho collectively

---

cultivate approximately a third of all hops in the world. So great is the production that one-in-three beers worldwide contain hops from the region.  

While the brewpub contributes to the urban character of Portland, hops play a role in shaping the rural character of Oregon’s Willamette Valley. Although Washington State has led the nation in hop production since the 1950s (New York led throughout much of the nineteenth century), Oregon is just as significant for its past and present contributions to the cultivation, marketing, and scientific advancement of the crop. In the first half of the twentieth century, Oregon ruled as the nation’s largest hop producer, with Willamette Valley growers contributing millions of pounds of hops to the world.  

Success lasting to the present day has defied odds when compared to the waxing and waning of many specialty crops in the region. Despite market fluctuations, plant diseases, and the nation’s experiment with prohibition, hops have remained a stable money-making crop since early Euroamerican farmers in Oregon planted rootstock approximately 150 years ago. The ups and downs, yet persistence of hop cultivation in the region offers a valuable opportunity to consider the region’s past.  

---

10 Hop Growers of America, “2009 Statistical Report” (Moxee, WA: Hop Growers of America, Inc., 2010), 11. In the past twenty years, many craft breweries—such as Sierra Nevada (Chico, California) and New Belgium (Fort Collins, Colorado)—have established hopyards on their properties, but the crops are minimal and inadequate for their levels of brewing. These operations should not be confused with the Pacific Northwest states that are the only three that export hops as a commodity. Internationally, the leading national producers in general order in recent years are Germany, the United States, China, the Czech Republic, the United Kingdom, Slovenia, Poland, Australia, Spain, and Ukraine.


12 Oregon’s wine industry has also had tremendous success. The origins of the Willamette Valley viniculture industry, however, only dates to the 1970s. See: Paul Pintarich, *The Boys Up North: Dick Erath and the Early Oregon Winemakers* (Portland: Graphic Arts Center Pub Co, 1997); Katherine Cole, *Voodoo Vintners: Oregon’s Astonishing Biodynamic Winegrowers* (Corvallis:
The present study shares essential themes with BridgePort’s virtual *Beervana* tour, but on a much larger scale. The narrative examines change over time in a localized place—the Willamette Valley of Oregon—while uncovering layered connections to environments and cultures across the planet. The history explores the global origins of a non-native plant, local landscapes, small farmers, and consumers of beer locally and abroad. It also examines the thousands of rural and urban workers, young and old, and of various racial and ethnic backgrounds, who picked the crops prior to mechanical harvesting advancements in the 1940s and 1950s. Further, it explains how early twentieth century scientists at Oregon’s Agricultural Extension Service in Corvallis embarked on global knowledge exchanges related to hops and how their successors at Oregon State University developed the first hop hybrids released in the United States. All of these layers led to the last step, the craft beer revolution and local foods movement that offer a welcoming avenue to consider not only the historical origins of beer consumption in the region but a far-reaching agricultural history.

As much as the libations consumed at the opening gala of the Columbia River Brewery provided and continue to provide meaning in Portland’s urban beer culture, there is a deeper meaning of place attached to the region that dates to the first hop plants cultivated in the Willamette Valley. The argument presented in these pages contends that

---

Oregon State University Press, 2011). For a wider look at all crops in Oregon that have waxed and waned over time, see: J. A. Bexell and E. B. Lemon, *The Oregon Farmer: What He Has Accomplished in Every Part of the State* (Portland: Oregon State Immigration Commission, 1913); Oregon State University, Agricultural Experiment Station, College of Agricultural Sciences, *100 Years of Progress: The Oregon Agricultural Experiment Station Oregon State University, 1888-1988* (Corvallis, Oregon: Oregon Agricultural Experiment Station, College of Agricultural Sciences, Oregon State University, 1990); William G. Robbins, *Landscapes of Promise: The Oregon Story, 1800-1940* (Seattle: University of Washington Press, 1997).
since Willamette Valley farmers first planted hops with commercial intent in the 1860s, the plant evolved under ever changing circumstances to assume an important role in creating an identity that linked the region’s rural-agricultural and urban-industrial production together, along with countless goods and cultures across the planet. The invented term *Hoptopia* is a nod to two identities of Portland and the Willamette Valley. First, it connects to the region’s claim as *Beervana*. Second, it connects to a longer canon of literature, from nineteenth century boosterism, to Stewart Holbrook’s mid-twentieth century celebratory observations, to Ernest Callenbach’s 1975 novel *Ecotopia*, all of which characterized the region as edenesque or utopian.\footnote{For utopian associations in and with Oregon, see: James J. Kopp, *Eden Within Eden: Oregon’s Utopian Heritage* (Corvallis: Oregon State University Press, 2009); Robert Bunting, *The Pacific Raincoast: Environment and Culture in an American Eden, 1778-1900* (Lawrence: University of Kansas Press, 1997). Callenbach’s utopia novel was a prize of the environmental movement in the 1970s. He painted the futuristic portrait of Oregon, Washington, and California’s secession from the United States to form their own environmentally-centered nation. See: Ernest Callenbach, *Ecotopia: The Notebooks and Reports of William Weston* (Berkeley: Banyan Tree Books, 1975); Ernest Callenbach, *Ecotopia Emerging* (Berkeley: Banyan Tree Books, 1981).}

**Space, Place, and Region: The Conceptualization of Hoptopia**

For almost two hundred years, scholars and popular writers sketched myriad identities for the Pacific Northwest, with the Willamette Valley as a major focus. They pondered what it means to live in this place, as culture interacted with environment over time. The geographer Yi-fu Tuan described this process as conceptualizing outward physical “space” into “place” by attaching meaning.\footnote{Yi-fu Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 1977). Also see: Yi-Fu Tuan, *Topophilia: A Study of Environmental Perception, Attitudes, and Values* (Englewood Cliffs, NJ: Prentice-Hall, 1974).} In the Pacific Northwest and
Willamette Valley, the various meanings attached to outward space reflected diverse peoples and landscapes. For lack of a better organizing principle, historian Carlos Schwantes identifies the Pacific Northwest by its political boundaries: Washington, Oregon, and Idaho. Other approaches are more creative. Some scholars argue that the region is best defined by the proliferation of Douglas fir, rain, or salmon. Another has suggested that this is the place where “Bigfoot walks.” The Willamette Valley itself might be best described as the landmass framed by the Coast and Cascade Ranges, whose waters drain into the Willamette River and ultimately the Columbia. While all of these expressions of place appeal to a variety of residents, there remain questions about intersections of environment and culture.\(^{15}\)

Anthropologist Eugene Hunn characterizes the Pacific Northwest by connections to the Indian cultures associated with Nch ’i-wana, the “Big River.” Historian Katrine Barber agrees that this is “Indian Country,” and that the Columbia River has historically tied together landscapes and peoples not just in the Pacific Northwest, but the entire Pacific Slope. William Bowen departs from those views in his specific study of the Willamette Valley to suggest that in the past two hundred years this region is best defined by its multiculturalism. From the Hudson’s Bay Company to the rise of homesteaders in the mid-nineteenth century, he painted a picture of English, French, and German peoples

who have a firm stake in the area’s historical identity along with American Indians. Many Oregonians agree. Perhaps they associated Bowen’s emphasis with the state motto, “Land of the Empire Builders,” to exhibit their understanding of place and region. Historian William Robbins weaves many of these ideas together, but emphasizes that the capitalist exploitation of the region’s resources has fundamentally shaped the current landscape and culture. In sum, the divergent and multiple meanings of the Pacific Northwest and the Willamette Valley are neither tidy nor absolute.  

Another historian, William Lang, captured these complexities of space, place, and region best, when he noted how “the ideas of region and place are creatures of history and imagination.” He followed this by suggesting, “The business of understanding the Pacific Northwest is messy but important. Knowing what we think about our place and our region offers opportunities to understand ourselves, our communities, and our relationships to a larger world.” Lang suggests that, at best, one writer’s explanation of regional identity and place can only satisfy a portion of the population. But it is an important convention because situating space into place gives cultures identity and meaning. A growing contingent of writers argues that modern people live in a globalized

---


and post-regional world; the designation of specific ideas of place is a dated exercise. But Lang, among other scholars, would suggest that it is difficult, if not dangerous, to deny residents of certain spaces their desire to attach meaning and to make places.\textsuperscript{18}

The \textit{Hoptopia} hypothesis draws from Lang’s ideas and many other scholars, as an imaginative construct that serves to explain aspects of a regional identity. By focusing on the local and global connections to a specialty crop, grown commercially in relatively few places in the world, this imagination hopes to offer academic and general readers a new perspective on place. Within these objectives, the intent is not to discredit other claims of regional identity and meanings of place, but, rather, to refocus attention on agriculture and consumption in a time that has largely witnessed the minimization of consumer knowledge of production and the origins of agricultural goods and products.\textsuperscript{19}

\textsuperscript{18} See, for example the discussions in Susan Kollin, \textit{Postwestern Cultures: Literature, Theory, and Space} (Lincoln: University of Nebraska Press, 2007). Much of this discussion centered on postmodern theorists Kenneth Frampton’s early 1980s notion of “critical regionalism.” For the scholarship as it has evolved in the years since, see: Douglas Reichert Powell, \textit{Critical Regionalism: Connecting Politics and Culture in the American Landscape} (Chapel Hill: The University of North Carolina Press, 2007).

Environmental writer William Vitek suggests that a current trend in academic and public discourse is the reconsideration of agricultural production and its relationship to larger social communities. The discussion includes the lamentation of an increasingly divergent urban and rural community structure, and the long perceived problem of an increasingly industrialized and consumption-based society that has dislocated itself from its producerist origins and thus the health of the Earth. Following the environmental movement of the 1960s and 1970s and the growing threat of climate change in the past twenty years, many others have joined in a concern about the demise of the agriculturalist in America and consequences for environments. “Generally missing in this discussion,” Vitek explains, “is any mention of the places we live as biological communities or the importance of human communities rooted in a storied landscape.” This is an extensive problem even in Portland and the Willamette Valley—a region that prides itself on being earth-friendly and conscious of sustainability. In addition to creating a new lens in which to understand regional identity and attaching meaningful place to outward geographical space, the current project seeks to address Vitek’s concerns. It offers an expansive history of hop cultivation in the Willamette Valley with the hope of reconnecting regional industrialized consumption in the twenty-first century to its deep roots in agricultural commodity production. The Hoptopia hypothesis links environmental and cultural histories to better understand human relationships with a surrounding environment.

2002); Cathy Stanton, The Lowell Experiment: Public History in a Postindustrial City (Amherst and Boston: University of Massachusetts Press, 2006).

Still, this project is not simply a theoretical exercise in conceptualizing place and rethinking agriculture and the environment. It is an historical work that connects rural agricultural to the rest of the world over time. Typically rural history presents challenges. As Dean May, among other historians, has observed, crafting rural history is difficult because the central historical actors rarely leave records behind. “As is often the case with rural people,” he notes, “there are few surviving diaries or journals. It is not easy to see into the minds of these folk, though it is their thoughts—their changing views of themselves, their relationships to others and to the land—that we would like to understand.”21 The present study benefitted from archival collections in nine state and local historical societies. Government reports, newspapers, magazines, photographs, oral histories, and even fiction help tie the story together. The study draws from environmental, social, and cultural historiographic traditions. It also leans significantly on William Robbins’s ideas and methods in tracing how specific material and cultural influences change over time in tangent with the forces of capitalism. Likewise, it draws from the now multiple-decade old school of New Historians including Patricia Nelson Limerick, William Cronon, and Richard White who emphasize that Western places are fundamentally multicultural, urban, and engaged in countless webs of economy and culture across the world. Finally, it also utilizes methods in environmental literature and ecocriticism in thinking about connections between texts, people, and agricultural and industrial landscapes.22


Many scholars who have advanced the field of Western and Environmental history have used commodity exchanges as their framework for inquiry. Historian Sterling Evans’s recent work on the North American twine industry demonstrates the transnational reach of commodity industries bound to specific places. John Soluri has engaged in related work concerning the Honduras banana industry. Journalist Kristin Johannsen has opened similar discussion in looking at the global commodity exchange of ginseng, from the Appalachian Mountains to urban China. Popular writers and historians Michael Pollan and Mark Kurlanski have also established a phenomenal foundation in commodity histories as public histories by offering far-reaching stories of tulips, potatoes, marijuana, cod, and salt. The success of all these works demonstrates that there is room for further considerations of commodities and places associated with them. These are discussions that have a welcoming, if not eager, audience who are sensitive to


food issues and interested in all aspects of what appears on their dinner table. The 
*Hoptopia* hypothesis draws from these other commodity histories for ideas on how to 
consider topics ranging from botany to politics, production to consumption.\(^2^4\)

**In Summation**

Long before Karl Ockert opened the taps of the Columbia River Brewery in 1984, 
there existed an extensive history of hop cultivation and beer production in the 
Willamette Valley and the larger Pacific Northwest. Uncovering the agricultural history 
of a cultural commodity is an exercise in knowing place and its past. The attendees of the 
Columbia River Brewery’s opening gala in 1984 were not only linked to Willamette 
Valley hop growers in the 1980s, but also to hop growers in the 1890s, businesspeople of 
the early 1900s, crop scientists in the 1960s, the historical climates and landscapes of 
Bavaria and Bohemia, and countless other environmental and cultural entities. Delving 
into 150 years of history through the lens of hops and beer casts a wide net. This is all to 
say that the contents of pint glasses in Oregon and the rest of the world have a much 
richer history than might be expected.

House, 2001); Mark Kurlansky, *Salt: A World History* (New York: Walker, 2002); Mark 
There are many more recent commodity study histories that helped inform my project, including: 
Douglas Cazaux Sackman: *Orange Empire: California and the Fruits of Eden* (Berkeley: 
and American Overseas Expansion* (New York: St. Martin’s Press, 1995); Allen M. Young, *The 
Chocolate Tree: A Natural History of Cacao* (Washington D.C.: Smithsonian Institution Press, 
1994).
Chapter One

“Hop Fever” in the Willamette Valley:  
Environmental and Agricultural Foundations  
1865 – 1905

Among the grain fields and orchards of Oregon’s Willamette Valley grows a distinctive plant called hops.\(^1\) Farming communities have welcomed the non-native specialty crop for over 150 years. Passersby cannot mistake the hop’s unique physical presence. The climbing plant stands alone for its vigorous vertical growth on wire-trellis supports and bright green cones that drop down the length of its vines. In the past thirty years, surrounding urban centers have become increasingly interested in hops. Once a topic reserved mostly for brewers, a craft beer revolution and local foods movement have inspired Portlanders and residents of other nearby metropolitan areas to adore the plant. Advertisers near and far have recognized this trend and made the hop increasingly visible on beer bottle labels and in television commercials.\(^2\)

\(^1\) Michelle Palacios, interview by author, Hubbard, Oregon, August 21, 2008. The term “hops” refers to both the plant and its cones. One would refer to the plant as a “hop plant” or the cone as a “hop cone.” When referring to multiple plants or cones, one would use the term “hops.” Michelle Palacios, formerly of the Oregon Hop Commission, suggests thinking of the phrasing in terms of apple and apples: the apple orchards are doing well; the apples harvested this year are high quality.

\(^2\) Michael A. Tomlan, *Tinged With Gold: Hop Culture in the United States*, (Athens: University of Georgia Press, 1992). This study draws often from the work of historian Tomlan, who wrote the only book-length work on the American hop industry. Tomlan’s work more broadly focuses on American “hop culture,” which he defines as, “not only the growth, cultivation, and harvesting of the plant, but also the economic, social, and recreational activities of the people who became involved in the various processes of and procedures dealing with the crop,” 6.
The widespread interest in hops is not new. It has just changed over time. Unbeknownst to many of today’s Pacific Northwest’s beer connoisseurs, not to mention the national beer culture, the Willamette Valley was once at the center of global hop production. At times in the first half of the twentieth century, Oregon produced forty percent of the American hop crop, or the hops used in millions of beers worldwide. The foundations of this regional specialty crop that shaped the way for this distinction, however, date to the Civil War and prior.³

The story of the Willamette Valley hop industry portrays relationships that grew between an agricultural specialty crop and its utilization by the beer industry whose success depended upon environmental conditions, technology, marketing, and science. Historically, hops have been the most important specialty crop in Oregon. Moreover, hop agriculture helped connect the Willamette Valley with the world.⁴

The Global Origins of “The Wolf of the Willow”

Hops are deep-rooted perennials that produce annual vines and cones. There are varieties native to East Asia (*Humulus japonicus*) and North America (*Humulus americanus*), but it is only the common hop (*Humulus lupulus L.*) native to Eurasia that

---


brewers covet. The hop is one of only two members of the *Cannabinaceae* family. The other is *Cannabis sativa*, more commonly known as marijuana. The cousins share many characteristics. They are both naturally dioecious, or species that assume individual plants of male and female sexes. Growers of both crops cultivate only the unfertilized, seedless female plants for harvest. While hops ultimately grow much higher, marijuana is also known for vigorous growth after germination. Both are capable of growing fifteen or more inches in one week. Yet, marked differences occur. A single hop’s productive lifespan can easily surpass twenty years. In this time its root system extends up to fifteen feet in the ground and its annual vines grow twenty feet or more upward. Cannabis plants mature within months to a height one-third of the hop and expire within a year. Another major difference lies in a hop plant’s production of one-to-two inch hard cylindrical cones, whereas its cousin produces softer buds. To the chagrin of those across the world who have tried, hops and cannabis cannot interbreed.⁵

Although used almost exclusively in beer-making for the past several hundred years, peoples across the Northern Hemisphere once collected wild hop cones for teas, tender shoots for food, and vines for twine. Perhaps the most common cultural adaptation of the wild hop was for medicinal purposes. The Roman naturalist Pliny the Elder documented hops nearly 2,000 years ago. He named the plant “the Wolf of the Willow”

---

because its vigorously growing vines killed his neighboring willow trees. Records of the plant increased after his writing, but only in reference to its wild state.  

It was not until the eighth century that Bohemian monks domesticated hops for ornamental purposes and five hundred years later that beer-makers across Europe consistently used the plant’s cones in their brews. Only after experimentation with dandelion, heather, and other plants did brewers decide upon the hop for its many useful characteristics. The bitter alpha acids in hops help balance the sweetness of malted grain, and hop oils provide pleasant aromatic qualities. The soft resins in *Humulus lupulus*, found in the inner yellow lupulin glands of the strobile (cone), also have strong antibacterial activity and act as a natural preservative, giving malted concoctions a longer shelf life. Brewers continue to employ the plant in the present day for all of these reasons.

From the seventeenth century onward, the world centers of commercial hop production resided in specific regions of Bavaria, Bohemia, and England. The reasons were environmental and cultural. First, the plant only grows and produces well at latitudes 30 to 55 degrees on either side of the equator and in climates that provide winter frosts for required dormancy, wet springs to initiate rapid growth, and dry summers to stave off pests and diseases. Although varied in climates and soil types, all three regions met these criteria. Second, cultivation in these regions served the major centers of European beer production. Initially grown in small plots and used for small-scale beer-making, hop agriculture expanded with the increased commercialization of the beer.

---

6 Neve, *Hops*, 1-29.

industry by the end of the eighteenth and into the nineteenth century. Europe’s escalating populations consumed the beverage for leisure, and, in this era of early industrialism, hopped beer often proved a safer beverage to consume than water. As Europeans colonized distant parts of the world, the fermented beverage traveled along providing refreshment and nourishment. Today’s popular India Pale Ale (IPA) traces its roots to nearly two-hundred years ago when it earned its name because of the large quantities of hops that English brewers used to preserve beer for long oceanic voyages to India. Along with adding zest to beer, hops fortified its transportation and the spread of a worldwide European beer culture.8

In the colonization of temperate regions of Australia, South Africa, and the Americas, European colonists imported a wealth of new plants and animals. Historian Alfred Crosby refers to these biological transplantations as *portmanteau biota*, or, in layman terms, suitcase species. Hops must be included in that list. Journalist Michael Pollan calls them the *botany of desire*, or plant species—whose wide range includes apples, potatoes, tulips, and cannabis—that humans continually modify for nutritional, aesthetic, or recreational purposes. As Pollan argues, “humans and plants are partners in a coevolutionary relationship” and “have been since the birth of agriculture more than ten thousand years ago.” He goes on to suggest, “The species that have spent the last ten thousand or so years figuring out how to best feed, heal, clothe, intoxicate, and otherwise

delight us have made themselves some of nature’s greatest success stories.”⁹ Common 
Eurasian and African fauna and flora that invaded colonized lands included horses, cows, 
pigs, sheep, wheat, rye, and rice. Other non-native plants included a range of fruits, 
vegetables, and specialty crops that filled dinner plates and contributed to the contents of 
beer and wine glasses.¹⁰

Records of the Massachusetts Bay Company indicate that along with hopped beer, 
hop plants arrived in North America with Puritan migrants as early as the 1620s. 
Throughout the rest of that century and the next, colonists across the Atlantic seaboard 
cultivated hops for household beer production. Some ambitious beer-makers sought out 
_Humulus americanus_ in the wild, but those plants produced smaller cones and were 
largely undesirable.¹¹

---

⁹ Michael Pollan, _The Botany of Desire: A Plant’s-Eye View of the World_ (New York: Random 
House, 2001), xiv-xvi.

¹⁰ Biological exchange is one of the most prevalent themes in environmental history. For the most 
complete overviews, see: Alfred W. Crosby, _The Columbian Exchange: Biological and Cultural 
Consequences of 1492_ (Westport, Conn.: Greenwood Publishing Company, 1972); Alfred W. 
Crosby, _Ecological Imperialism: The Biological Expansion of Europe, 900-1900_ (Cambridge: 
Cultivation in the Americas_ (Cambridge, Mass.: Harvard University Press, 2001); Judith Ann 
Carney, _In the Shadow of Slavery: Africa’s Botanical Legacy in the Atlantic World_ (Berkeley: 
University of California Press, 2009). For discussions on how biological exchange developed 
along with Euroamerican colonization, see: William Cronon, _Changes in the Land: Indians, 
Dunlap, _Nature and the English Diaspora: Environment and History in the United States, 
Canada, Australia, and New Zealand_ (Cambridge: Cambridge University Press, 1999); Allan 
Kulikoff, _From British Peasants to Colonial American Farmers_ (Chapel Hill: The University of 

¹¹ Native hops occur throughout North America. Scientists describe the most prominent area for 
wild hops as the Upper Midwest in “well-drained terraces of river basins,” but ample samples 
have also been collected recently in Colorado, Arizona, and New Mexico. See: R. Hampton, E. 
Small and A. Haunold, “Habitat and Variability of _Humulus lupulus_ var. _lupuloides_ in Upper 
Commercial hop production in the United States emerged within the first decade of the nineteenth century. While many citizens of the early republic preferred hard cider and whiskey, a mid-nineteenth century temperance movement inspired a general consumer change to less-potent lagerbeer. Rising global populations who desired beer and increasingly sophisticated brewing science occurred simultaneously. From the 1830s onward, the United States became an important player in the international hop industry with western New York contributing significant quantities to the world’s brewers. By the Civil War, states in the upper Midwest—where the central urban centers of American beer production had migrated along with a significant German immigration—also grew hops successfully. Many of the agricultural techniques and associated cultural activities of harvest originated in these regions, as well as an American connection to international markets. Yet at the turn of the century, the hop industry in New York and the Midwest began to decline because of pests and disease. Growers from these regions also faced competition from high-yielding hop-raisers on the Pacific Coast who benefitted from a wealth of environmental and cultural circumstances that provided ideal conditions for hop growing.¹²

The Willamette Valley: An Agricultural Eden

Euroamerican contact with the Willamette Valley began in the early nineteenth


century when coastal fur trappers moved inland. For two decades following Lewis and
Clark’s journey from 1804-1806, far western lands remained the province of American
Indians. But change occurred rapidly. Within the next three decades English, French
Canadian, and American employees of the Hudson’s Bay Company expanded their
presence outward from Fort Vancouver on the Columbia River to the surrounding
country, including southward to the Willamette Valley. French Prairie became the first of
these settlements on the Willamette River and an important hub of early Euroamerican
farming. By the 1840s, larger groups of emigrants set out from eastern regions of the
United States with religious motivations and enthusiastic prospects for farming and other
enterprises. Two major political events also affected early settlement. First, in June of
1846, the United States and Great Britain signed the Oregon Treaty, establishing political
boundaries on the forty-ninth parallel. The southern lands that encompassed what is today
Oregon, Washington, and Idaho, became known as Oregon County. Second, in 1850,
Congress signed the Donation Land Act to encourage settlement in the Willamette Valley.
The act generously offered households up to 320 acres of land—twice as much as later
homestead acts. The measure achieved success for the federal government. Settlers
spanned the entire valley in their large estates by the end of the decade and helped
Oregon become the nation’s thirty-third state in 1859.¹³

¹³ For overviews of Pacific Northwest settlement, see: Earl Pomeroy (foreword by Elliot West),
(revised edition) (Reno: University of Nevada, Press, 1991); William A. Bowen, The Willamette
Valley: Migration and Settlement of the Oregon Frontier (Seattle: University of Washington
(Seattle: University of Washington, Press, 1968); Dorothy O. Johansen and Charles M. Gates,
For specific discussion of the Donation Land Act, see: William G. Robbins, Landscapes of
Promise: The Oregon Story, 1800-1940 (Seattle: University of Washington Press, 1997), 83-85;
Many of those who settled the Willamette Valley in the mid-nineteenth century believed that they had found an agricultural utopia. Seemingly anything planted grew in this area bounded to the west by the Coast Range and to the east by the Cascades, and to the north and south by the Columbia River and the Calapooya Mountains (near present-day Eugene). Some saw the valley as a “horn of plenty,” due not only to its agricultural potential, but because the physical boundaries of the valley begins at a point in the southern mountains and grows wider by the time it reaches the Columbia River. While the abundant and incessant rain of the long winter and spring seasons prevented many from declaring this place a “second Eden,” the achievements and potential in farming took center stage by midcentury.14

Instant agricultural success resulted in part from the valley’s American Indian populations who regularly burned the oak savannah to encourage hunting and gathering. Livestock grazing and the planting of crops easily adapted to these managed landscapes.15 Non-human nature also carved a welcoming home for the new agriculturalists. The Willamette Valley’s windward marine climate blended with the characteristics of a Mediterranean climate—such as the Northern Central Valley of California, a region also perceived as a farming paradise. Mild winters and springs

---

14 Robbins, Landscapes of Promise, 92; Robert Bunting, The Pacific Raincoast, 72-76.

marked with ample rains and long dry summers encouraged plant growth.\textsuperscript{16} The rich topsoil of the Willamette Valley also impressed farmers. Westward-flowing glacial floods from the last ice age carried much of this nutrient-rich treasure to the region, mixing it with ancient wind-blown volcanic dirt to create a rich sandy-loam. The glacial floods further benefitted the Willamette Valley’s first farmers as it carved major river networks for efficient transportation. In addition to benefits of soils and water, the Willamette Valley and its surrounding foothills and mountains offered ample fishing, hunting, and logging opportunities that supplemented the yields of nineteenth century farmsteads.\textsuperscript{17}

While Willamette Valley farmers recognized early the myriad natural resources in their chosen valley, life remained challenging. They lived far from the population centers in the Ohio and Mississippi valleys and their communities were sparsely populated. Furthermore, given their isolated location, integrating into the American economy was not an easy task. These problems resembled those of earlier Euroamerican colonists in North America. The new Oregonians drew upon a familiar story on the opposite coast. According to historian Robert Bunting, “Settlers sought not so much the creation of a new society as the re-creation of an older, familiar one which allowed them to advance their own personal fortunes.”\textsuperscript{19} Along with forming familiar community and religious ties, farmers set about “improving” the agricultural landscape by clearing forests and draining


\textsuperscript{17} Bunting, \textit{The Pacific Raincoast}, 72-76.

\textsuperscript{19} Robert Bunting, “The Environment and Settler Society in Western Oregon,” \textit{The Pacific Historical Review} 64, no. 3 (August 1995): 418.
wetlands. They fenced off land and diverted water. They eradicated species they viewed as noxious, including predators: wolves and bears that posed threats to livestock as well as ground squirrels and rabbits that ate crops. The end result was the imposition of an order upon the environment for the purpose of economic and community development.20

At the same time that farmers “improved” the lands and waters of the Willamette Valley, they successfully introduced familiar and marketable flora and fauna—the *portmanteau biota*. Grain crops and livestock flourished. Pigs became particularly abundant as they roamed freely and thrived in an environment plentiful in food and newly lacking in predators. But, as did the Massachusetts Bay Company migrants in New England, the initial settlers emigrating to the Willamette Valley only had the seeds and plants they could carry on their westward journeys. The choices for agricultural crops expanded after Henderson Lluelling and William Meek established the region’s first horticultural and nursery supply company in 1848. By the early 1850s, settlers delighted in creating a landscape similar to their homelands with nonnative shade trees, vegetables, and specialty crops that mostly included fruits and nuts. Not all specialty crops, however, proliferated by this time.21 Early nurseries did not offer hops, and settlers could only

---


acquire them if they imported European rootstock from the East Coast or Midwest. Some settlers had experimented in hops, as evidenced by the 1850 Agricultural Census that recorded eight total pounds produced in Oregon Country. Other attempts may also have existed without record. Ten years later the Census reported 493 pounds of hops grown in the new state of Oregon.\(^\text{22}\)

By the end of the 1850s, Euroamerican agricultural settlements spanned the entire Willamette Valley and the region began to earn praise for its economic developments in farming. Grain and livestock became central to the livelihoods of the new farmers. An early historian of the region even noted, “Wheat is the staple product of the Willamette Valley. Its suitableness has ever been recognized since the arts of agriculture began in the northwest, and the first rude attempts at cultivation were made.”\(^\text{23}\) California’s gold rush initially provided outlets for these commodities. By the 1860s, Willamette Valley growers established a transoceanic grain trade, particularly white winter wheat. The farmers used the ample tributaries of the Willamette and Columbia rivers to ship grain from their homes to locations all over the world. Liverpool became a central market, but markets extended to the East Coast, East Asia, and Australia.\(^\text{24}\) Historian William Robbins suggests that the wheat trade offered an early “metaphor for the ever-expanding and complex interrelationships that developed between Pacific Northwest landscapes and


\(^{24}\) Robbins, *Landscapes of Promise*, 99; Bowen, 88-90.
national and international places.”\textsuperscript{25} The grain industry provided a critical aspect of the Willamette Valley’s identity as an agricultural eden rooted in the land and in connections across the globe. Farmers developed dependable livelihoods and successful communities intertwined with the rest of the world via their land and labor. The early farming and marketing infrastructure proved indispensable for later farmers selling a more diversified array of commodities.\textsuperscript{26}

Although agriculturalists cultivated goods for the international marketplace, urban areas proved essential for the growth of Willamette Valley farming. It was in a group of small cities that other Oregonians processed, marketed, and shipped the bounties of the farm. By the 1840s, Oregon City became a center of gristmill and sawmill activity, as well as a center of marketing for shipments northward on the Willamette River from all parts of the valley. Although far from the size of San Francisco, the Willamette Valley’s cities grew and proved critical serving throughout the rest of the nineteenth century. By the 1870s Salem had a population of over 1,000 and Portland had a population of nearly 10,000. Robbins again provides important context for what this meant not only in grain shipping, but other exports as well:

As it grew in size and importance, Portland developed a strategic infrastructure that fronted two worlds, one that faced outward to the Pacific and oceanic markets and sources of capital, and a second that looked inland to a vast hinterland linked

\textsuperscript{25} Robbins, \textit{Landscapes of Promise}, 98.

to Portland by the magnificent Columbia River and its tributary, the Willamette.27

The business and infrastructure developed in Portland and other cities became the arteries to distribute the products of commercial agriculture in the Willamette Valley and would be vital for later ventures. Country and city intertwined early and often in the region’s agricultural expansion.28

Along with the benefits of agricultural success, residents of the Willamette Valley celebrated their quality of life. Historians have suggested that the Willamette Valley, in particular, differed from other settlements in the Far West. In contrast to largely individualistic and male-centered settlements of California and Nevada, the Willamette Valley tended to be a destination for families. This occurred, in part, from the prevalence of missionary activity, but also from the desire of families to travel westward as a whole. Tightly-knit communities and towns arose as a result and violence was far less prevalent than in California and Nevada. Further adding to the idealized quality of life in the Willamette Valley were medical factors. Doctors believed that the environment was exceptional not just for farming, but also for health. They saw salubriousness in the valley in its mild winters and dry summers, and in its lack of mosquitoes and other pests.

27 Robbins, Landscapes of Promise, 103.

that plagued the Central Valley of California.\textsuperscript{29}

Taken together, the region’s mid-nineteenth century identity reflected the benefits of a mild climate for good health and profitable farming, as well as community development. The booster Hall Jackson Kelley drew attention to these facets of life soon after his ventures to Oregon Country in the 1830s before major settlement. Residents and onlookers did too. One East Coast traveler of the 1850s remarked, “The universal expression of the…population, is, that Oregon excels the world for health, variety of beautiful scenery, certainty of good crops, excellence of water and water privileges…and for strength and depth of the soil.” He would even go on to note, “I know of no people so generally, or so highly pleased with their locations, or homes, as those of the Willamette valley.”\textsuperscript{30} Similar sentiments appeared across local and national media outlets throughout the nineteenth century. The Willamette Valley even became a destination for utopian communities, popular in New England and the Midwest. Seeking the benefits of community and agricultural promise in 1856, William Keil of Bethel, Missouri established the Aurora Colony in Oregon. The settlement was one of the longest lasting utopian experiments of the nineteenth century (until 1883) and continues to be a town today populated by many descendants of the original inhabitants. Its success and a growing body of literature pertaining to the Willamette Valley’s ideal environmental and


agricultural qualities magnified in the second half of the nineteenth century.\textsuperscript{31}

Prior to the Civil War, however, the Willamette Valley lacked a diversified agricultural economy that would bring greater wealth to the region. Grain and livestock provided a crucial base, but most farmers failed to accrue wealth on these alone. Since Lluelling and Meek established their nursery in 1848 and others followed in the next decade, agriculturalists had the ability to grow higher valued specialty crops. But they could not effectively market or ship these crops for lack of efficient transportation, storage, and refrigeration. After Northern victory in the Civil War in 1865, pro-industry and expansion agendas provided new opportunities for western agriculturalists of all types. Most importantly, forward-looking capitalists assisted in opening the Far West via railroads.\textsuperscript{32}

The marketing for specialty crops in the Pacific Northwest changed in the 1870s and 1880s as transcontinental railroads provided new shipping opportunities. While seafaring vessels remained a critical resource for commodity transport, railroads could both transport goods from farms to cities and across larger sections of the country at a faster pace. Additionally, the development of refrigerated railcars by the 1880s allowed for successful shipment of fresh fruits, vegetables, and other specialty crops to the East Coast and other destinations across North America. As William Cronon among other historians has suggested, railroads revolutionized American commodity extraction by opening the

\textsuperscript{31} James J. Kopp, \textit{Eden Within Eden: Oregon’s Utopian Heritage} (Corvallis: Oregon State University Press, 2009), 39-87. For celebratory literary works from late nineteenth century Oregon writers, see Joaquin Miller, Sam Simpson, Eva Emery Dye, Frederic Homer Balch, and H. L. Davis.

\textsuperscript{32} Pomeroy, \textit{The Pacific Slope}, 96-103.
vast natural resources of the United States to the world at an extremely rapid pace. In the Willamette Valley and the larger Pacific Northwest, railroads contributed to the expansion of an agricultural utopia. Farmers could both sell more grain and livestock and produce higher valued specialty crops. Agriculturalists across the region engaged in these new farming opportunities when the Northern Pacific Railroad first reached Portland in 1873 and the Southern Pacific Railroad helped complete a line to California and the southern transcontinental routes in 1887. Although growers in California had transcontinental access for shipping specialty crops prior to their peers in the Pacific Northwest, farmers in Oregon and Washington quickly joined their southern neighbors in diversifying their farmsteads.\(^3^4\)

The new transportation links gradually changed agriculture in the Willamette Valley by making possible the raising and sale of specialty crops. While wheat and livestock remained the most abundant commodities grown into the twentieth century,


nearly all farmers began testing their luck with fruits, nuts, and hops by the 1870s. Curiosity certainly inspired some, but it was the prospect of earning cash income that inspired most. The new crops redefined what it meant to live in the agricultural utopia. The reports of the Agricultural Census made clear that specialty crops became an increasingly important aspect of the state economy. Farmers integrated new knowledge of the crops and developed new relationships with urban processing facilities and marketing companies. Agricultural societies intensified their efforts in establishing information for growing and marketing desirable new crops.35

Amidst the specialty crop revolution, perceptions of the Willamette Valley, along with its landscape, changed. The valley’s booster literature of the late nineteenth century enthusiastically embraced the more diverse agriculture. Promotional literature from national media outlets, railroad companies, and international business interests increasingly referred to the cornucopia of crops that grew in abundance in the rich valley soils. In 1882, for example, a Northern Pacific Railroad publication reported of the Willamette Valley and the larger Pacific Northwest:

Whenever the plow is freely used, and the seed planted, the growth of grain and vegetables becomes luxuriant. Orchards, groves and fields increase the cooling surfaces, giving more moisture and more summer showers in all that region…The practical benefit already is a larger variety of productions, and a grand harvest of cereals for home and foreign markets.36

35 Starr, Inventing the Dream, 161-162; Vaught, Cultivating California, 95-114.

36 The Northern Pacific Railroad, The Northern Pacific Railroad: Sketch of Its History; Delineations of Its Transcontinental Line; Its Features as a Great Through Route From the Great Lakes to the Pacific Ocean; Its Relations to the Chief Water Ways of the Continent; and, A Description of the Soils and Climates of the Region’s Traversed By It as to Their Adaptability to Agricultural Production; With Descriptive and Statistical Exhibits of the Counties on and Near Its Line in Minnesota and Dakota (For the Information of Those Seeking New Homes and Profitable Investments) (Chicago: Rand, McNally and Company, 1882), 15.
Locally, government agents, chambers of commerce, and regional media outlets such as *The Oregonian*, *The Willamette Farmer*, *The Overland Monthly*, and *The West Shore* also promoted this new diverse agricultural vision of grain, livestock, and specialty crops. In 1886, the secretary of Oregon’s Board of Immigration suggested:

> We have every kind of fruit, vegetables in profusion, grow wheat in quantities and have large crops of cereals of all kinds...Cattle and sheep raising are very profitable, our timber is of the best, we have hop raising, grape culture, salmon canning, mining...and in fact everything. Let me off with ‘everything,’ for the list is too long.\(^{37}\)

Although hyperbole abounded, the words genuinely captured what many residents believed: agriculture of all types thrived in the Willamette Valley and offered the potential for everyone involved to make money in a thriving society.

It was in this late nineteenth century atmosphere that a commercial hop industry emerged on the Willamette Valley landscape, a niche commodity grown by farmers in the midst of diversifying their landscapes and selling their produce to buyers from all around the world. Success was immediate and expansive, and offered a different metaphorical picture than a Willamette Valley dominated by wheat with Portland as the entrepôt to the world. Amidst the wealth of promotional literature surrounding the Willamette Valley’s edenesque features, *The West Shore*—an important and widely-circulated nineteenth century journal of the region—noted the appearance of this new crop in the valley in 1887:

> There is another profitable crop, to which more attention is being paid yearly. No less than four hundred acres of hops are now growing within the limits of Polk County. The deep, rich, alluvial bottom lands along the Willamette and its

---

tributaries are splendidly adapted to hop culture. Their occasional overflow by spring freshnets seems but to enrich the soil and increase the yield.

The article continued by underscoring the importance of hops as the most important specialty crop of the Willamette Valley:

There are hundreds of acres of land adapted to hops, which are now not in cultivation. A low estimate is fifteen hundred pounds to the acre, though some fields have produced twice that amount. Taken for a series of years, the average price of hops is twenty cents per pound, though in the past few years it has risen as high as one dollar, and fallen as low as seven cents. The cost of raising hops is about eight cents per pound. A yield of fifteen hundred pounds per acre, at twenty cents per pound, gives a total of $300.00 per acre. This is a good profit at average price, and in the seasons of high prices, some growers have become comparatively rich on one crop of hops.45

While other regions in the West made similar claims, Oregon alone emerged as the national leader of hop production in the early twentieth century.46

The arrival of hop culture in Oregon from Europe and New York followed a different path than many other specialty crops. Henderson Llueiling and William Meek’s nursery did not initially sell rootstock as part of the normal commerce of horticultural offerings, nor did any of the visionaries that grew up with the country from 1850s onward.


46 For example, see: C. W. Mott, General Emigration Agent, “All About Fruit and Hop Raising, Dairying and General Farming, Lumbering, Fishing And Mining In Western Washington” (St. Paul, Minnesota: C. W. Mott, General Emigration Agent, c. 1907), 7, 9. There, he noted, “The deep alluvial soil of the valleys is excellent for general farming and for hay crops, and is considered the best hop land in the world. Hops grow to great perfection and yield more heavily than in any other hop regions of the East or of Europe. The crop runs from 1,500 to 3,000 pounds to the acre…Hops are one of the staple crops of western Washington. They were first grown in the Puyallup Valley, but they are now being cultivated also in the White River, Skagit, Snohomish, Chehalis, and other fertile valleys of western Washington. A larger average yield is realized in this part of the country than anywhere else in the United States, and the quality is the finest.”
Commercial hop-growing arose in a more matter-of-fact manner: out of the local desire for beer.

The Legend of Uncle Isaac and Ezra Meeker

The beginnings of the Pacific Northwest’s commercial hop industry date to 1865. It was then that an Olympia, Washington brewer became frustrated with his inability to acquire hops from his distant location vis-à-vis European centers of cultivation. Seeking a local hop supply, Isaac Wood (or “Uncle Isaac” as his community endeared him) inquired with a neighboring farming family, the Meekers, about planting a few hills of the crop of which he had acquired some rootstock. It was a serendipitous decision. Despite no former experience in hop cultivation, Jacob and his son Ezra achieved early success. As Ezra Meeker noted in his autobiography, the following September netted 180 pounds of hops that sold for over $150. “This sum,” Meeker explained, “was more money than had been received by any of the settlers in the Puyallup valley, expect perhaps two, from the products of their farms for that year.”


emerged as the earliest prominent hop growers in the Pacific Northwest. Ezra Meeker asserted that the future of Pacific Northwest farming rested with the specialty crop.\textsuperscript{49}

The birth of the Pacific Northwest hop industry could not have occurred without prior developments in commercial agriculture. Likewise, the crop could not have been developed in many other farming regions of the West. Herbert Myrick, an early twentieth century American hop expert from New York, explained:

\begin{quote}
The hop industry may be regarded as a very peculiar one in many respects...The area upon which hops can be grown is limited, owing to peculiarities and necessary conditions of soil and climate, not only in this country, but throughout the world. Unfavorable weather at the critical period of hop development may almost ruin in a few days what had promised to be a crop large in quantity and fine in quality.\textsuperscript{53}
\end{quote}

Northern California and Pacific Northwest growing conditions ideally fit these criteria, with the Willamette Valley particularly suited for the crop. The region shared many

\textsuperscript{49} The writer would like to thank Dennis Larsen of the Ezra Meeker Historical Society for his assistance in uncovering the history of the Meeker family’s first hop plantings. In his various writings, Ezra Meeker continually misrepresented both his first year of planting as 1864 or 1865, and the brewer for whom he planted as Charles Wood, not Isaac Wood. Larsen has drawn from various publications, including those with remarks from Ezra Meeker’s brother John Valentine Meeker, to paint a more accurate picture. Additionally, there is debate over who the first planted the first hop yard. Some newspapers from the late nineteenth century indicate that Messrs. Meade and Thompson of Puyallup began their hop yard a year or two prior to Jacob Meeker. The debate will likely be left unsettled. Regardless, it was clear that Ezra Meeker took the charge of promoting the hop industry in the Pacific Northwest. For Isaac Wood’s brewery, see: Pioneer and Democrat (Olympia, Washington Territory), July 22, 1859; Pioneer and Democrat (Olympia, Washington Territory), May 24, 1861. For the Meeker family’s first hop plantings, see: “Hops and Their Cultivation,” Tacoma Daily Ledger, July 25, 1894, 2; “Hop Growing in the Pacific Northwest,” The Pacific Rural Press 24, no. 9 (August 26, 1882), 134; E. Meeker, Hop Culture in the United States: A Practical Treatise on Hop Growing in Washington Territory from the Cutting to Bale (Puyallup, Washington: Ezra Meeker, 1883), 8; Meeker and Diggs (ed.), Ox-Team Days on the Oregon Trail, 155; For the Thompson and Meade debate, see: “The Hop Fields of the Puyallup,” Evening Star (Snohomish, Washington), September 29, 1877; The Pacific Rural Press August 26, 1882.

environmental characteristics with Bavaria, recognized as the most important growing region in the world. Heinrich Joh. Barth, of the international hop dealer Barth and Sohns, has more recently explained, the:

Willamette Valley is reminiscent of the landscape found in Hallertau in Germany. Similarities can…be found between the climates of the regions. The soil is generally medium to heavy. Ample rainfall and a mild maritime climate make possible the cultivation of over 100 types of agricultural produce.\(^{54}\)

Comparisons to traditional European growing areas are fundamental in understanding the hop industry’s success both past and present. The transatlantic transplantation made environmental sense.

Following the Meeker’s success, hop cultivation in the Pacific Northwest spread rapidly, with other Puyallup Valley farmers in Washington Territory planting rootstock by the 1870s. In the Willamette Valley, William Wells and Adam Weisner of Buena Vista (Polk County) planted the first English rootstock brought from Wisconsin with commercial intent in 1867.\(^{55}\) Their efforts ended in failure, but made other farmers in the region aware of the crop. Two years later, with rootstock acquired from Weisner, George Leasure of Lane County reaped Oregon’s first commercial hop harvest.\(^{56}\) Inspired by this success and Meeker’s enterprising efforts, several other farmers established a broader foundation for a Willamette Valley hop culture on the banks of the McKenzie River near Eugene. The following decade witnessed success by notable growers such as J. W.


\(^{55}\) “Oregon’s First Hopyards,” *Oregon Native Son and Historical Magazine*, August 1899, 180.

\(^{56}\) “First Hop Yard,” *Eugene City Herald*, Sept. 8, 1899, 220. Different publications refer to George Leasure as George Leisure. I will use Leasure because the majority of sources utilize it.
Kunoff and George E. May. Alexander Seavey also became a prominent figure in the area’s hop culture with his sons operating one of the nation’s most successful hop marketing companies well into the twentieth century.57

In 1873, the Oregonian reported that yields in the Willamette Valley topped 2,000 pounds an acre, or approximately double the output from other hop growers around the world. In one year at least, George Leasure produced over 3,000 pounds per acre, or three times the normal yield. As this news spread, acreage in the region multiplied. Hop farmers recognized that they were not just beneficiaries of an ideal climate, soils, and shipping opportunities, but also had the advantage of an absence of European pests and diseases that reduced yields.58 By 1874, Ezra Meeker proclaimed that his farming brethren across the Pacific Northwest had caught “hop fever.”59

After a promising beginning to the Pacific Northwest hop industry, the 1870 Agricultural Census reported a combined 16,707 pounds of the product harvested in Oregon and Washington. The crop supplied local brewers, but did not have an impact on the national or international marketplace.60 Ten years later the census noted, “Of the 46,800 acres in this crop during the year 1879 New York reports 39,072 and Wisconsin

57 Lang, History of the Willamette Valley, 562.
58 Tomlan, 11-18; “Oregon Hops,” Oregonian, March 10, 1873.
4,439. No other state besides California reports as many as a thousand acres.”\(^{61}\) Still, these observations failed to note the rapid growth of hop-raising in the Pacific Northwest during the previous decade. By 1880, although a fraction of New York state’s harvest, the Pacific Northwest had produced nearly a million pounds of hops on 838 acres of land.\(^{62}\)

But that was just the beginning. In 1882, a global hop shortage brought a new and lasting attention to the Pacific Northwest’s hop growing potential. Unpredictable weather that year led to one of Europe’s worst agricultural outputs of the late nineteenth century, and disease attacked hop crops of the American East Coast and Midwest.\(^{63}\) Along with California’s expanding hop industry, Oregon and Washington drew attention as reliable sources of hops. Prices skyrocketed as brewers from Latin America to Europe placed orders for Pacific Coast hops. Ezra Meeker compared the agricultural windfall to California’s 1849 Gold Rush:

> The high value of hops prevailing for the past four years, culminating in the unprecedented price of one dollar per pound for the crop in 1882, has naturally attracted a wide-spread interest. An article that can be produced in large quantities, and sold for nearly ten-fold its cost, engenders a speculative feeling akin to that of a veritable gold-mining furore [sic] of the palmy days of ‘49, when the discovery of gold in California was first made known to the multitude.\(^{64}\)

---


\(^{62}\) United States, Department of the Interior, Census Office, *Report Upon the Statistics of Agriculture; Compiled From Returns At the Tenth Census*, 10, 15.


\(^{64}\) Meeker, *Hop Culture in the United States*, 3.
Meeker’s penchant for hyperbole did not exaggerate the revenues from the hop bonanza. What started as Isaac Wood’s desire for a local hop supply in Olympia began to transform into a lucrative agricultural industry with an international marketplace demand. In the closing years of the nineteenth century anyone with land west of the Cascades saw an opportunity in “the Wolf of the Willow.”

**Rooted in the Local and the Global**

From the 1860s to the early 1900s, the Willamette Valley hop industry expanded, at a faster pace than Meeker’s Puyallup Valley or other areas in Washington and California. The growth connected the local landscape and consumers across the globe, making for a new character of the Willamette Valley’s environment, economy, society, and culture. Most immediately, the late nineteenth century expansion of the hop industry left its footprint on the land. Farmers first preferred to plant hopyards (more commonly called “hop gardens” in Europe) on bottomlands, claiming better yields and closer access to shipping than areas at higher elevations. This is why one nineteenth century historian noted, “The home, par excellence, of the hop is on the McKenzie River, in Lane County where the largest and most productive plantations are found.”

Cultivation entailed evenly spaced rows of vines that climbed ten or more feet high. Growers primarily used timber poles to support the vines, setting them in the spring after shoots established themselves and pulling them out in late summer for harvest. The other noticeable imprint of hop operations on the landscape was large barnlike structures that housed kilns for

---

drying and curing. These buildings, called hop driers or hop houses (or oasts in England), contained long sturdy ramps on the exterior so that wagonloads of uncured hops could be unloaded onto an inner upper story drying area. On the inside large kilns burned wood and sulphur to promote a uniform drying process.66

The emergence of the hop industry altered agriculturalist identities. For most farmers in the Willamette Valley, the hopyard became only part of a larger diversified farmstead. In 1885, the Oregonian reported on the appearance of this newest agricultural development in the region: “On a broad slope, near Fulton, about one mile and a half south from Portland is a model hopyard. It is 14 acres in extent, and each year of the six years since it was planted, has averaged 200 pounds of cured hops to the acre.”67

Although the size of Willamette Valley farmsteads had been shrinking from the 320 acre Donation Land Act claims as the population increased and competed for land, the Fulton farm’s fourteen acres still would have been a small fraction of the entire operation.68

---

66 Tomlan, 31-33; Meeker, Hop Culture in the United States, 10-33.

67 “On a Model Hop Farm,” Oregonian, October 6, 1885.

rest of a farmstead would have included grain and hay fields, pastureland for cattle, orchards, and a vegetable garden. The landscape would not have suggested that hops had become the primary crop of the Willamette Valley. Rather, it drew notice as a widespread specialty crop that supplemented the rest of the farm’s operations. Most farms grew between five and twenty-five acres of hops. Their goals were modest: to generate cash income to buy consumer goods in the modernizing economy.69

There were, however, those with larger ambitions. The allure of potential economic gain from hops inspired various types of investors to try their luck. Some of these new farmers had money to purchase acreage and supplies for hops outright. Others, seeing the high prices of hops by the 1880s, became tenant farmers in the hopes of striking it rich quickly. It could be an extremely speculative enterprise requiring extensive investment in plants, drying facilities, and labor. Not all that who entered the business achieved success. Because they were unskilled or unlucky with weather or a continually shifting international market, the hop industry left some people in financial ruin. For this reason, Herbert Myrick, the hop expert in New York, observed, “The hop industry is a gamble,’ has therefore come to be an axiom.”70

Regardless of their economic background, all early Pacific Coast hop raisers differed from contemporary growers of other specialty crops. Viticulturalists in the Sonoma region of California, for example, brought grape cuttings directly from southern

---

69 Keeler, 2-5.

70 Myrick, The Hop, 19; Tomlan, 89. Tomlan suggests, “The swing in prices paid for hops continued in succeeding decades, a problem largely attributable to the failure of hop crops abroad. In the years from 1880 to 1910, hops sold for as little as $.03 per pound and for as much as $1.13 a pound. In the period from 1930 to 1950, the price ranged from $.10 to $.69.”
Italy with the specific intention of growing a crop related to their ethnic and geographic roots. Scottish immigrants became the main fig growers in Oregon’s Yamhill County—not because of specific cultural ties to the crop, but because a large landowning Scottish firm promoted settlement in the area on the premise that the crop would generate worldwide appeal. Unlike these specialty cash crops, western hop-raising had no substantial ethnic or geographic ties, save for the handful of California horticulturalists and household growers who carried rootstock with them during migrations from the Midwest or New York. The thousands of subsistence farmers in the Pacific Northwest that would integrate the crop into their farmsteads had little prior knowledge about the plant, and lacked knowledge as to its cultivation. Inexperience with the crop added to its risks.71

Far less obvious than the poles, vines, and driers that marked changes across the Willamette Valley landscape was how the cured product integrated into the local and international economy. Unlike Ezra Meeker who had a close relationship with the brewer Isaac Wood and signed a long-term contract with Portland’s Henry Weinhard’s Brewing in 1869, most regional farmers did not fraternize or deal directly with the end-users of their harvest. Even in a period when brewing expanded in Portland, Salem, Tacoma, and Seattle, the majority of Willamette Valley hop farmers sold their crops to middlemen.74


Before the turn of the century, several local hop companies appeared in the Willamette Valley and the larger Pacific Northwest. Hop dealers like Colin Carmichael of the Yakima region in Washington and the Kreb Brothers in Salem established markets in Boston, New York, and London. But it was mostly a group of grower-dealers who dominated organized sale and transport of hops. These individuals tended to grow hundreds of acres of their own crop and contracted with smaller farmers for sale domestically or abroad. By the 1890s and opening years of the twentieth century, the most influential grower-dealers on the Pacific Coast were Ezra Meeker of Puyallup and Emil Clemens Horst of Sacramento. Both of these men stationed representatives in the Willamette Valley during the summer growing and harvest seasons to scout out the choicest and most productive hopyards. The competition for hop contracts was cutthroat. Letters from Meeker family members stationed in the Willamette Valley frequently mentioned Horst’s aggressive tactics such as offering a penny more per pound to farmers than their offer. The spirit of this competition favored small growers because it brought buyers to their hopyards. But the arrangement also put pressure on them to produce high

---


quality products, sometimes difficult given their unfamiliarity with the recently introduced crop.\textsuperscript{76}

Once contracted for sale, a Willamette Valley farmer’s hops entered the international marketplace just like any other commodity. Some hops, like Ezra Meeker’s, ended up locally in the ales and lagers of Portland’s Henry Weinhard’s or Seattle’s Rainier Brewing Company. Other local hops ended up in the vats of Anheuser-Busch, Pabst, Miller, and other breweries in the Midwest. Millions of pounds also ended up overseas in the brewing kettles of beer-makers in Brazil, China, or the largest American hop importer of the era, Great Britain. While the U.S. Department of Agriculture (USDA) had assisted Pacific Coast hop growers in expanding their markets, it was mostly the efforts of the larger grower-dealers and other hop distributors who negotiated international trade. Ezra Meeker himself spent various stints in England and Germany learning the details of the hop trade and had been one of the first growers to seek out shipments on the same ocean-bound ships that carried wheat to Liverpool. He had also later stationed his son in England to strengthen relationships and continue to acquire new knowledge about the industry. Emil Clemens Horst was a native of Germany who immigrated first to New York to open a hop company, before moving to California in the

1890s. His connections to both the eastern United States and Europe remained strong until his death a half-century later.77

The global connections of the Pacific Northwest hop industry were not simply outward. Growers could meet their need for water, timbers, manure fertilizer, and the raw materials needed in kiln construction locally. But most of a hop-grower’s needs arrived from beyond the region. Growers continually imported hop rootstock from Europe, and became fascinated with finding new varieties that provided high yields and were valued by brewers. English varieties produced the highest yields, but other specimens arrived from Bohemia, Bavaria, Canada, Russia, and even New Zealand and Tasmania.78 Yet rootstock was only the farmers’ first need from outside of the region. For sprays used in pest and disease prevention, growers utilized tobacco from the American South and whale oil and the bark of the quassia tree from around the Pacific Rim. They also utilized lye, sulphur, and burlap in various points of cultivation and curing, acquired from various merchants inside and outside of the region. By the turn of the twentieth century, as hop growers transitioned from timber poles to the trellis system, they imported coir—the string made from coconut—from tropical locations across the Pacific Ocean. According to one historian, the yearly needs of large growers such as the Ezra Meeker could include


“poles numbering in the tens of thousands, over eight thousand pounds of twine to string their yards, and fifteen hundred gallons of whale oil and twenty-five hundred pounds of caustic soda.”

The needs of these resources for hundreds of growers had a tremendous impact on the larger regional and global economy.

Not surprisingly, perhaps, it was Ezra Meeker who originally orchestrated relationships with Seattle and Portland merchants for acquisition and distribution of these materials. His E. Meeker Company was at the center of these local and global commodity exchanges and therefore acted as a middleman between urban centers and rural farmers. Meeker’s efforts in the hop industry allowed him to become one of the Pacific Northwest’s first millionaires in the closing decades of the nineteenth century. For all of these reasons, residents of the region anointed him the “hop king.”

Still, Meeker served needs beyond mere commodity exchanges. Because regional hop raisers had little to no agricultural familiarity with the crop prior to securing rootstock and planting, it was necessary to build knowledge for entry into the business. Meeker understood this and positioned himself as a matrix for knowledge acquisition and dissemination. He first learned of hop culture by reading newspapers and trade journals published in Europe and the American East Coast. There was also a range of books on the subject. English volumes available during his foray into the business included E. J.

---

79 Tomlan, 88.

Lance’s *The Hop Farmer* (published in London in 1838) and H. M. Manwairing’s *A Treatise on the Cultivation and Growth of Hops, in the Kent Style* (published in London in 1855). These works not only described contemporary agricultural methods, but also included analysis of contemporary markets. With the rise of American production by the mid-nineteenth century, domestic publications also aided Pacific Northwest growers. The most prominent books included Andrew Fuller’s *Hop Culture* (published in New York in 1865) and D. B. Rudd’s *The Cultivation of Hops and Their Preparation for Market* (published in Wisconsin in 1868). New York’s *Emmet Wells’ Weekly Hop Circular* was the most important weekly journal.

Beyond these published manifestos and market reports, Meeker also spent considerable time corresponding with hop growers from near and far. He traveled around the Pacific Coast, East Coast, and England learning from leaders of the industry. His sources of knowledge therefore reflected both local variances of cultivation and first hand encounters with the most important representatives from around the world. The information allowed Meeker to succeed along with the regional growers who depended on his knowledge. He gained a reputation as an expert in the field, and he was willing and eager to share information with others. The efforts served his interests by inspiring new growers to purchase supplies from him and he hoped to raise the profile of West Coast hops.81

---

81 Meeker and Diggs (ed.), *Ox-Team Days on the Oregon Trail*, 155-159; Wm. Sanders (on behalf of the Central Experimental Farm, Department of Agriculture, Ottawa) to E. Meeker Esq., March 30, 1894, Box 3, Ezra Meeker Collection, Washington State Historical Society, Tacoma, Washington. This letter is one in a series of correspondence from Canadian scientists seeking to exchange hops and information. It indicated that a Canadian representative (from Ottawa) would be visiting Meeker and the larger Pacific Northwest to learn about hop growing and to inform the “Canadian Governmental Experimental farms.”
As the hop industry took firm root in the Pacific Northwest, Meeker recognized the need for an updated informational work. In 1883, a year after the global hop shortage that put the Pacific Northwest on the map of brewers from around the world, he penned *Hop Culture in the United States: A Practical Treatise on Hop Growing in Washington Territory from the Cutting to Bale*. The work became the fundamental source of knowledge for the region’s growers. While careful to declare the dangers of hop-raising and the whims of the market, Meeker outlined clearly the plans for cultivating and preparing the crop for buyers.  

82 He explained the basic information such as the need for planting rootstock in the spring, cutting back the initial shoots to encourage a second growth of more stable and vigorous stock, and training these climbing vines to timbers. He also expressed many variances specific to the Pacific Northwest. Contrary to the set-up preferred by many English and German growers who had less land to cultivate, for example, Meeker wrote, “Where but one pole to the hill is intended, the plants should be seven feet apart, set in squares. Some growers prefer to set two poles to the hill and in such case usually plant seven feet and a half or eight.”  

83 He included advice on other local variations in the Pacific Northwest such as available timber resources for poles and sources of fertilizer. Meeker also noted that for first year growers, “It is customary to plant corn or potatoes between hop-hills...sometimes one row and sometimes two between the rows...The young vines are allowed to lie on the ground, as they produce no hops, but it will cost very little.”  

84 Beyond these means of cultivation, Meeker also


83 Ibid., 10.

84 Ibid., 83.
imparted his wisdom on acquiring sufficient labor sources for seasonal picking, the need for quality controls in the picking process, and the intricacies of kiln drying for preservation after harvest. In total, the work aided growers not only with agricultural methods and insight into marketing, but also meeting labor demands and creating new technologies. His work is the best evidence of not only the flow of new knowledge to the region, but also of its creation and dissemination elsewhere. Surviving records of the E. Meeker Company reveal a steady string of requests for the book not only from Pacific Coast hop growers, but from around the world.85

As the hop industry matured, Meeker became just one of many regional farmers integrated in a local and global knowledge exchange. Other growers approached the business with the same verve as the “hop king” and engaged in widespread information-seeking activity. They scoured available print resources, both acquiring and contributing to the larger creation and dissemination of hop knowledge. Many made similar journeys as Meeker to the East Coast and Europe to better understand all of the details of the industry. Additionally, local newspapers offered advice on where to find plants and supplies, and where to acquire loans. They also reported findings from around the region. In 1874, for example, the Oregonian reported that “T. W. Spencer, of McMinnville, in this State, has just returned from the hop regions of Puget Sound. He informs us that the people of that region are all in a fever of excitement about hops, and everyone who can

secure a [spot] of ground is preparing to start in the business.”\textsuperscript{86} An article from 1876 noted that, “The hop raisers are in the midst of their picking this week, and we are informed that that there will be a fair crop, a good quality, and a good price per pound.”\textsuperscript{87} Over time, the federal government also recognized the regional importance of hops. In the 1890s, the USDA provided reports on cultivation methods and assessed the potential to expand hop exports across the globe, particularly to Latin America and East Asia. In the first decade of the twentieth century, the federal government also invested in a hop research program in Corvallis and momentum grew with the passage of the Smith-Lever Act of 1914 that expanded the role of the Agricultural Extension Service. Crop scientists in Oregon established lasting relationships with other leaders from around the world, most notably England’s Wye College, the nation’s agricultural institution housed in Kent.\textsuperscript{88}

By the turn-of-the-twentieth century, Willamette Valley hopyards were undeniably the products of materials and knowledge from around the globe. They connected Pacific Ocean whaling to English scientists, American tobacco growers to Pacific Northwest loggers, and urban merchants to small farmers. The end product for all of this integration, of course, benefitted brewers and beer-drinkers in every inhabited continent.

\textsuperscript{86} \textit{Oregonian}, December 14, 1874.

\textsuperscript{87} “Eugene Items,” \textit{Oregonian}, September 18, 1876.

At the closing of the nineteenth century, the hop industry and its global reach attracted praise and recognition both inwardly and outwardly. Locally, an 1898 publication of the Oregon State Board of Agriculture explained how hop crops were overtaking staple crops:

Choice prairie and bottom lands in the southern part of the county [Washington] are worth as high as $8100 an acre. These lands are usually put in fruits or hops rather than in general farming. Farming lands grade down to $10 an acre or even less for partially improved farms. It all depends on the location and quality of the land and the degree of improvement. Near Oregon City acre property is up as high as $1,000 and $1,500 an acre.94

The same report also noted:

The garden spot of the world for the cultivation of hops is the Willamette valley, and the city of Salem sits in the center of the greatest hop district in the world. Every year the large hop dealers of London and the Eastern cities have their representatives occupying offices in Salem, and the money for an average of 75,000 bales passes through the banks of this city.95

Across the country in New York, Herbert Myrick agreed, noting of the possible “monopoly of the world’s hop market by the United States, and especially by our Pacific Coast States.” He even went on to suggest: “The author believes such monopoly to be possible, at least to the extent of the United States producing the largest share of the world’s consumption.”96 Across the Atlantic Ocean, European interest also intensified. In 1900, Emanuel Gross, a German expert, warned his readers of a transformation in the industry. “The introduction of hop-growing in the United States,” he suggested with an

---


95 Oregon State Board of Agriculture, The Resources of the State of Oregon, 124.

96 Myrick, The Hop, 11.
eye to the Pacific Northwest, “marks a turning-point in the history of the industry, the consequences being adverse to the interests of European growers.”97 While Gross remained unsure of the lasting power of American production, his writings revealed a new global awareness of America’s far corner. At the time of all of these comments, however, concerns arose about the sustainability of the Willamette Valley hop industry.

**Confronting and Hopping Obstacles**

Even with the good fortune of excellent climate, soil, and access to markets, Willamette Valley hop farmers faced a range of obstacles by the 1890s. The growers brought some of these challenges upon themselves, but many challenges resulted from forces outside their control. Addressing these issues became central to maintaining success and expanding the industry. Some farmers were not immediately successful, and some failed. It was a reality that has faced growers to the present day.

The initial challenge for all American hop growers in the late nineteenth century was competition from Europe. The centers of hop agriculture in Bavaria, Bohemia, and England had longstanding relationships with brewers. They also grew the preferred “noble” hop varieties: Hallertau mittelfrueh, Saaz, Tettnang, and Spalt. Brewers in the United States and other European settlements across the world also preferred these “noble” varieties and paid a premium because they were trained by brewmasters in Europe. European recipes and styles of beer, after all, utilized European varieties of hops. The English hops commonly grown in the Willamette Valley were acceptable, particularly in

---

Great Britain. But they were otherwise not the first choice of brewers. Additionally, Pacific Coast hops were often stigmatized because of the perceived poor quality and presentation of the produce. Whether for the sheer newness of hop cultivation in the region or lack of quality controls, farmers struggled to improve their products’ reputation that often received downgrades because hired laborers did not adequately pick hops free of stems and leaves. Brewers worldwide did not want to purchase hop bales that contained significant amounts of detritus that they believed reduced the overall quality of beer.99

Environmental conditions increasingly added to the other concerns of Pacific Northwest hop growers. By the 1890s, the region began to lose the original benefits of virgin soils and the initial absence of Eurasian pests and diseases. Rootstock imported from Europe, as well as opportunistic species native to North America, introduced botanical threats. Hop aphids or the threat of plant diseases became two of the largest concerns. The insects and diseases added to other environmental problems including extremely wet or dry weather that either rotted plants or burned them. All of these problems threatened the quality of the region’s hop harvests.100

Pacific Northwest hop growers unintentionally brought further ills upon themselves as they expanded rapidly in the fierce heat of “hop fever.” As Herbert Myrick explained of the region’s excellent conditions:

99 Gross, Hops, 9, 310.

100 One New York Times article suggested, “The Hop Crop of Washington and Oregon is in a more promising condition than it was last year. The lice, which have caused such trouble in the yards of England and New-York State, did no great damage here until 1890, and in some yards there were few lice until last summer.” See: “A Promising Hop Crop,” New York Times, July 25, 1892.
This apparent advantage has operated to the detriment rather than to the benefit of…Oregon and Washington…because it has led to hop planting by inexperienced persons, or to the setting out of larger plantations than the owners could properly operate except by incurring heavy mortgages.

He went on to highlight the related problem that, “Low prices following overproduction have therefore ruined a larger proportion of those who went into hops on the Pacific coast than in any other part of the world.”

Myrick was not alone in making these observations. Ezra Meeker and other industry leaders warned growers in Oregon and Washington of the conundrum.

If hop growers survived international stigma, pests and disease, and fickle markets, there were still other concerns. The most pressing issue for Willamette Valley and other western hop farmers was the need for labor during harvest. Once able to rely on family and neighbors, the recruitment of seasonal labor sometimes reached crisis levels. As historian Mark Wyman argues, this applied throughout the agricultural West because of its sparse population. Yet, the hop crop brought about uncommon challenges. One USDA report indicated that “in spite of the fact that the hop acreage is only a small fraction of that given to soft fruits, apples, and other intensive agricultural crops,” the harvest required up to four times as many workers. Hop plants per acre produce huge


quantities of cones on their ten to twenty-foot high host poles or trellises requiring intensive labor. The growers’ labor problem lasted until mechanization of the harvest occurred in the 1940s—addressed in a later chapter.

Hop growers met these challenges individually and collectively. If hop crops matured to produce cones, the best way to protect themselves was through individual contracts with workers and brewers. Ezra Meeker led the way with his fifteen-year contract with Henry Weinhard’s in Portland, but others did not have the same option. They did, however, enter into various contracts that helped them. Although buyers used the contracts to protect themselves from purchasing low quality hops, regional growers benefitted from clauses that mandated high standards of quality control. In the Hartless hopyard near Portland, for instance, the buyers A. J. Luce Co. of Oneida, New York, made the following terms for the 1898 crop:

The said hops to be of a choice quality, free from mould [sic.], and not affected by spraying, in sound condition, of good even color, fully matured, cleanly picked, properly dried and cured, and put up in good merchantable order and condition, in new 24-ounce bale cloth, in bales averaging about one hundred and ninety pounds each, gross weight, tare seven pounds per bale. The said hops are not to be the product of the first year’s planting.

To protect both seller and buyer, the contract also noted,

The parties in the second part agree….to pay the parties of the first part by checks payable at the Ladd Hilton Bank at the City of Portland…at a rate of Nine (9) cents per pound for each pound of hops delivered and accepted on the conditions above stipulated for, in the following manner, to wit: One dollar upon the signing of these presents, the receipt whereof is hereby acknowledged; Four cents per pound at or during the harvest of said hops; providing the hops shall be deemed by the parties of the second part to be in a condition to warrant them to make said advances.105

While contracts like these often led to disputes about the quality of hops upon arrival, the growers benefitted from entering multi-year contracts that assured their agricultural work would be rewarded financially.

Contracts could also protect growers in their negotiations with hired labor. An 1890 contract with a farmer from Aurora, Oregon and a laborer, George Lee, demonstrates how growers sought to ensure adequate labor standards. Recognizing the need for increased quality control, the contract noted that the laborer “promises to pick the nominal hops grown on the yard…in a good workman like manner free and clear of stems and leaves…and further promises and agrees to pick them clean from the vines and ground.”\(^{106}\) A different contract in 1892 for L. N. John of Aurora utilized the exact same language for similar standards.\(^{107}\) If the picker did not meet these conditions, then the grower had a similar financial out in terms of the buyers related to quality control. While seemingly a small article in the contract, this was the most effective way that Pacific Northwest growers could better standardize their industry in compliance with the writings of critics in and out of the region.

On a collective level, to mitigate economic challenges and to boost the reputation of their produce, some Pacific Northwest hop growers formed hop-growing organizations as early as the 1870s. They sought to control plantings against overproduction and standardize the harvest and processing of the crop for quality. Ezra Meeker led the attempts to professionalize the Pacific Northwest industry, looking for standardization

\(^{106}\) Hop Contract for George Lee in Aurora, Oregon hopyard, August 16, 1890, Manuscript Collection, Aurora Colony Historical Society, Aurora, Oregon.

\(^{107}\) Hop contract for L. N. John in Aurora, Oregon hopyard, August 1892, Manuscript Collection, Aurora Colony Historical Society, Aurora, Oregon.
and upgraded quality to enhance the reputation for the entire region’s hop production. In *Hop Culture in the United States*, he explained, “The export trade can be greatly increased if the standard of quality is raised and kept up to the point our growth will warrant, and in the form of hop-extract as well as with hops in the bale, take possession of the great English markets with other American products.” The efforts, similar to those of California fruit and nut growers at the time, did not achieve immediate success.

Meeker also led efforts in price controls, providing leadership for the range of loosely tied hop-growing organizations across the Pacific Coast. But the work was difficult. By the 1890s, the stigma cast upon West Coast hops by European brewers held sway and new biological dangers threatened hop growing. Additionally, the fragmented character of agricultural life in the Pacific Northwest and the individualistic spirit of many farmers frustrated these efforts to stabilize prices. For these reasons, grower organizations did not achieve any measurable gains well into twentieth century. Furthermore, the economic climate following the Depression of 1893 worked against grower agreements regarding price guarantees.

By 1893, the combined hop acreage of Oregon and Washington nearly topped New York, but in doing so created a glut in the market that affected growers large and small. A year later, the *Oregonian* even suggested that the region’s growers were “flooding…the market with surplus.” With prices staying low, some growers left hops on the vine not wanting to pay for labor costs; all growers were left wondering what to do.

With the same problem two years later, Ezra Meeker penned an article published for the

---

Oregonian asking that growers not only refrain from planting new acreage of hops, but also pull them out of the ground. Growers recognized Meeker’s leadership role and obliged by abandoning thousands of acres of hops. The effort marked the highest levels of coordination and cooperation of Pacific Northwest growers in the nineteenth century. Unfortunately, the timing was wrong. Within the same year, the nation entered a major economic depression and the global value of hops spiked, leaving hundreds of growers angered at their decision to abandon their crops. The turn of events proved the last straw for some growers engaged in the inconsistent hop market. Ezra Meeker, the regional “hop king,” even decided to abandon the hop business altogether by the end of the decade.

The End of Ezra’a Era and the Rise of a “Golden Age”

In the mid-1890s, Ezra Meeker relinquished his reign as the regional “hop king.” Where many credit hop aphid infestations as the culprit creating his exit, the Depression of 1893 was to blame. Meeker’s millions earned from “the Wolf of the Willow” dwindled in the face of upswings in European production. Scores of small farmers in the Pacific Northwest defaulted on loans that he as a middleman administered. By 1897, he abandoned his acreage to seek gold in the Yukon. Yet, Pacific Northwest hop culture endured beyond the charisma and expertise of this one man. Emil Clemens Horst and other grower-dealers filled the vacuum. So too did brewing industry professionals and USDA scientists. Amidst the continued success, more Willamette Valley farmers planted


111 Hudson-Cooler, 26-37; Tomlan, 99-103.

112 Green, Ezra Meeker – Pioneer, 14-18.
the crop. By 1905, Oregon became the largest hop producer in the United States, with nearly forty-percent of its total production.

Moreover, in the first decade of the twentieth century, residents and outsiders alike recognized the plant as a vital part of the region’s identity as an agricultural utopia in a region conceived of as a “horn of plenty.” Many also understood that it connected small farmers with brewers and beer drinkers around the world. Still, a host of problems loomed in the early twentieth century amidst the Willamette Valley’s expanding hop acreage and growing reputation as an important center of production.
Chapter Two

“Hop Capital of the World”:

Business, Politics, and Expansion in the Face of Prohibition and War

1905 – 1943

In 1905, Oregon became the United States’ largest hop producer, with the Willamette Valley cultivating the majority of the state’s acreage. Once a speculative undertaking by a handful of enterprising farmers in the 1860s and 1870s, the plant became Oregon’s most important specialty crop in the first half of the twentieth century. Hops thrived west of the Cascades. They provided cash income for diversified farmers, impressive wealth for heavily invested grower-dealers, and the zestiness of beer around the world. As the crop caught on, the hop became an increasingly visible sign of the Willamette Valley’s agricultural diversity and a marker of how the region’s rural commodities linked urban centers and marketing networks near and far. While growers faced new obstacles in the early twentieth century, the hop industry increased production year after year.¹

Subsequent generations of hop farmers benefitted from the failures and successes of their predecessors in hops and other specialty crops across the Pacific Coast. They also benefitted from the increased support of transnational brewing and hop companies and the assistance of scientists employed by the brewing industry and U.S. Department of

Agriculture (USDA). Despite success, a new set of problems loomed. State and national prohibition movements threatened the beer industry and its domestic hop market. The American entrance into the Great War put pressure on farmers to abandon non-food crops to help with war effort. Still, Willamette Valley hop culture persevered. In fact, as it adapted to issues new and old in this era of modernization, it succeeded where other American agricultural undertakings failed.  

The “Great Extravaganza” and Oregon’s “Natural Bounty”

In the same year that Oregon claimed the title as the nation’s largest hop producer, the state’s growers saw a tremendous opportunity. The city of Portland announced its debut as an international economic and cultural center by hosting its first and only world’s fair. The “Great Extravaganza,” as many dubbed it, provided an invaluable opportunity to display Oregon’s bounty—goods produced and processed in the state and shipped from Portland. Organizers sought to highlight the state’s diverse products and market Oregon goods as a brand name, taking a page from California agriculturalists and entrepreneurs. 

---


When Oregon business leaders considered the world’s fair, they thought deeply about how to promote the products of their state’s industry and agriculture. Decades prior to the turn of the century, Oregonians contributed to the global marketplace with timber, wheat, and salmon leading the way. But the state’s leaders felt slighted during the previous year’s extravaganza in St. Louis where organizers allotted little room for Oregon’s display. Topping the list of complaints, one representative noted, “The Oregon exhibits were placed in various exposition buildings at the Louisiana Purchase Exposition” and “the State did not receive from these exhibits the amount of good that it should.” To rectify this slight, organizers of the Portland event decided to feature the wide range of the state’s accomplishments “under the roof of Oregon's own State building.” Situated near the fair entrance, the Oregon Building would house exhibits from each of the state’s counties to showcase their exceptional contributions to the world. More pointedly, as historian Carl Abbott has noted:

The exhibits and activities elaborated on the theme: Oregon had grown by harvesting its natural bounty from forests, fields, and rivers for national and

---

114. For the most extensive account specific to California agricultural cooperatives, see: Clarke A. Chambers, California Farm Organizations: A Historical Study of the Grange, the Farm Bureau, and the Associated Farmers, 1929-1941 (Berkeley: University of California Press, 1952).

4 Historians of the Pacific Northwest have long realized that its natural resources have been essential to its identity. Two edited collections offer good historical and historiographic insight into what is an extensive topic. See: Dale D. Goble and Paul W. Hirt, Northwest Lands, Northwest Peoples: Readings in Environmental History (Seattle: University of Washington Press, 1999); William G. Robbins and Katrine Barber, Nature’s Northwest: The North Pacific Slope in the Twentieth Century (Tucson: University of Arizona Press, 2011).

international markets. In the coming decades Oregonians hoped to produce more and more and sell its products more and more widely.6

The historical timing of these efforts, for hop growers and all other Oregon producers, could not have been better.

In the years leading up to Portland’s 1905 World’s Fair, the United States emerged as an international military and economic empire. The War of 1898 and its aftermath expanded the nation’s land holdings in the Caribbean and across the Pacific Ocean. It opened new marketplaces among colonized peoples. More important was the pervasive industrialism that spawned growing cities with expanding populations in the United States and Europe. Millions of people, primarily from Europe, immigrated to the United States from the end of the American Civil War in 1865 to the outbreak of World War I. The world’s fair organizers recognized opportunities for advertising Oregon goods to these expanding markets inside and outside the U.S. proper. The official title, “The Lewis and Clark Centennial American Pacific Exposition and Oriental Fair,” pointed to expansion into the Pacific world while at the same time emphasizing an American rediscovery of Oregon, one hundred years after Lewis and Clark trekked across the Pacific Northwest.

At the fair, the Oregon Building displayed samples of the state’s abundant natural resources. Neatly stacked grain varieties stood arranged in pyramid fashion in the

---

Umatilla County Exhibit. Josephine County featured giant pinecones from its forests and a wide assortment of fruits and vegetables from its agricultural lowlands. In the Washington County exhibit, hop vines saturated with cones hung heavy from the columns and arches—not unlike the star-spangled bunting and flags that draped countless others on fairgrounds. Far from simple adornments, the display of all of these products was calculated and purposeful. New technologies and expanded transportation networks by rail, ship, and road opened markets across the world. With innovative marketing and exposure, Oregonians associated with the world’s fair knew that they could become global leaders in the production and sale of the wide range of products from the state.7

The fair’s timing was propitious for Willamette Valley hop growers. Not only did Oregon achieve the U.S. lead in hop production ahead of New York and California in 1905, but a year later hops also became the fourteenth most lucrative crop in the nation. Oregon contributed forty percent of the U.S. crop, an astounding amount and enough to provide for one-in-ten beers in the world. Topping sixteen million pounds of hops annually on over 20,000 cultivated acres by the end of the decade, the crop attracted increasingly larger investments. The presence of hop plants and cones hanging in the Oregon Building signaled the continued importance of the Willamette Valley to the national international hop and brewing community in a period when beer consumption grew domestically and abroad. It also established the tone of how leaders of the regional hop industry hoped to improve upon its success and better connect to the global marketplace. What remained to be seen was how a still largely unorganized body of

individual small growers might respond to surrounding forces of modernization, ranging from new technologies in the industrial age to reform agendas of the Progressive Era.  

Transformations and Challenges of the Early Progressive Era

In the first decade of the twentieth century, approximately 1,500 farmers cultivated hops in the Willamette Valley. The mere presence of hop acreage and the hop houses necessary for drying crops left an imprint on the landscape. Independence, Oregon—southeast of Salem—held the highest concentration of hop-raisers. Growers believed the location on Willamette River bottomlands made it ideal, and for this reason its residents were the first to claim the title “Hop Capital of the World.” Nevertheless, the expansion of crops to uplands instigated debates about the best place to grow hops. In *The Settler’s Handbook to Oregon* of 1904 Wallace Nash reported that the issue became quite a controversy, noting:

> Indeed today it is a matter in dispute which class of hop yards do the best. The upland hop man claims that his hops are the richer and more fully ripened in quality and produced at less expense, because needing no spraying to defend the hops from mold and lice—the lowland hop man says that his hops are earlier by from one or two weeks, and so run less danger of rain.

---


9 Tomlan, *Tinged With Gold*, 157-214. Tomlan’s book has an entire chapter on hop driers. It is one of the reasons this project does not go into great detail about them.


Regardless of the debates, it was clear that hop yards expanded to all areas of the Willamette Valley. Marion, Polk, and Lane counties led production, but the Agricultural Census reported hop yards in all parts of the valley.\textsuperscript{12}

Beyond spreading to uplands in the early twentieth century, the continued success of hop farming depended on the introduction of a critical new technology. Advancements in wire trellis systems inspired growers to abandon timber poles used since the industry arose in the Pacific Northwest. An industry report from the 1930s explained:

In the high trellis system posts are set every fourth or fifth hill and extend 12 or 15 feet above the ground. The bottom of the posts may be creosoted to make them last longer. Wires are stretched over the tops of the posts across the yard each way at right angles. Above the hills not covered by the main cross wires, extra wires are strung from the wires supported by the posts. Anchors keep the system of wire taut.\textsuperscript{13}

The benefits were ample as the report continued:

Growers claim the following advantages for the trellis: (1) The hops remain healthier, (2) spraying against the aphids and other pests is easier, (3) the hops mature earlier, (4) the cones have better color, (5) the cones are easier to pick and can be picked cleaner, (6) vines do not require cutting which would weaken the stock by loss of material that otherwise returns from the vine to the root.\textsuperscript{14}

As the century progressed, all hop raisers in the Willamette Valley adopted the trellis system. The trellis system saved on costs and benefitted from reducing the labor needed


\textsuperscript{13} Freeman, “Hop Industry of the Pacific Coast States”: 156.

\textsuperscript{14} \textit{Ibid.}\phantom{a}
to set and remove timber poles each spring and fall. Other technological advances did not arrive so rapidly. Attempts to integrate mechanical harvesters failed until the late 1940s. So too did emerging technologies of motorized tractors and plows that could not operate effectively in narrow hopyards. Aside from the arrival of automobiles to the farm population in the 1920s and 1930s, the Oregon hop industry operated on pre-industrial terms, or tied to the labor of humans and animals.\textsuperscript{15}

The inherent lack of technological advancement was in part related to one of the central characteristics of Willamette Valley hop growers in the early twentieth century: the majority remained diversified family grain and livestock farms that grew the specialty crops for cash purposes. Small farmers did not have money to invest in new machines, nor did most want to take tremendous risks. While some Willamette Valley hop-raisers certainly entered the business with the sole purpose of speculating to get rich in high-priced years, the larger character of the hop industry centered on individualistic family farmers with limited direct connections to the hop and beer industries. Many small-scale growers did not even consider the destination or uses of their hop crops.\textsuperscript{16} Harvey Kaser, a grower from Silverton, Oregon, observed that some “growers were completely ignorant of any of the brewing trade…All they had to rely on was what the handlers told them.”\textsuperscript{17}

Similarly, hop-grower L. D. Wood noted later in the century that, “The growers of hops

\textsuperscript{15} American staple crop farmers benefitted motorized farm instruments much earlier than those in specialty crops. By the 1920s, three million tractors filled the nation. See: Bruce L. Gardner, \textit{American Agriculture in the Twentieth Century: How it Flourished and What it Cost}, 11-12.

\textsuperscript{16} Ming Kee, oral history interview with Daniel C. Robertson, April 19, 1982, Benton County Historical Society, Philomath, Oregon.

\textsuperscript{17} Harvey Kaser, oral history interview with Kathleen Hudson-Cooler, April 16, 1982, Benton County Historical Society, Philomath, Oregon.
know less of their use than of any other farm product...The average grower does not even know the names of the brewers who finally buy and use his hops.”

Kaser and Wood’s points underscored a disconcerting trend for leaders of the industry. As American hop expert Herbert Myrick feared in 1904, increasing numbers of farmers entered the hop business with no previous expertise or desire to innovate or collectively organize for advantages in the marketplace. It was a precarious position given the opportunity with the opening of industrial and urban markets across the globe. Industry leaders were further discouraged because California specialty crop growers had laid a blueprint for marketing success in the previous decades. In agricultural cooperatives, California fruit and nut growers successfully created Sunkist, Diamond Brand Walnuts, and Fancy Brand Almonds among other trademarks. Success followed these brands. It showed that farming cooperatives could be a major economic boon in bringing crops to market and obtaining good prices for products. California events made little impact upon Willamette Valley hop growers at that time.

What did impact Oregon hop growers was the larger historical movement of national prohibition. At the same time that the state became the national leader in hop


production, a tide of Progressive Era moralism and health consciousness rolled from coast to coast. Within this movement, a body of agriculturalists sought to remind the nation of their historical importance as producers. Farmers tied to the back-to-the-land and agricultural cooperative movements harkened back to Thomas Jefferson’s views of the American farmer as the protector of the nation’s land, producers of its goods, and therefore pillars of moralism. Hop farming, for its dual role in contributing to the vice of alcohol and for its rise as an overwhelmingly speculative enterprise, did not fit this Progressive Era vision. The juxtaposition to other specialty crop growers clarifies these ideas. In simple terms, historian David Vaught suggests, "Fruits and nuts…made California synonymous with health and prosperity." Hops stood outside of this image of health and vitality.

By the mid-1890s, members of the Oregon State Board of Horticulture shunned hop growers, setting a tone adopted by many agriculturalists throughout the Progressive Era. In one report from 1894, the board outlined how fruit-growers were not of the same ilk as hop and grape growers. “When we consider the grape and hopvine, we enter directly into a consideration of great sources of revenue,” they noted, “but yet they are in one sense two of the greatest products of evil, for both are the indirect cause of most of

---

the leverages that make wrecks of men.” The writers turned then to passages of the Bible warning against abuses of alcohol. Later reports made similar claims while promoting fruit orchards as healthful and moral in contrast with hops and grapes.

Despite these concerns, Willamette Valley hop growers pressed on. Moralist rhetoric either fell upon unreceptive crowds or never reached the hundreds of families who continued to cultivate the crop. More likely, the diversified growers simply recognized the potential for cash income as acceptable regardless of moral rhetoric aimed at them. They happened to live in one of the best environments in the world to grow the crop, and in an era that witnessed an expanding brewing industry due to growing populations and the growing popularity of lager beer. As one historian suggests, the era “spawned the saloon,” a period in which millions of Americans and immigrants in the industrializing and urbanizing world sought respite in malted and hopped concoctions.

At the very least, hop growers knowledgeable of their product took comfort when breweries stood up to moralist reformers with their own marketing efforts. Catering to Progressive Era audiences, Anheuser-Busch issued a series of advertisements proclaiming that their product was the “natural drink of America” and inspired “Appetite, health, and vigor.” One ad noted:

---


In every glass is health; and what is health but efficiency and power? It comes to your table a delicious, sparkling food—a wholesome malt beverage, exhaling the aroma of hop gardens and fragrant scent of new-mown northern barely fields…. Nothing better for the system than good beer, and Budweiser is the best.  

Pabst marketed its beer similarly in the early twentieth century as a “Clean, Pure, Wholesome” product. Mirroring Anheuser-Busch, Pabst also had a series of advertisements that noted, “When you drink beer you want Quality and Purity, because that means health and strength.” Willamette Valley hop growers tried their hand at similar advertisements in local newspapers, explaining how hops were wholesome and aided in digestion. But growers were better served by the nation’s large brewers who had extensive advertising campaigns.

Despite complaints from rallying prohibitionists, beer sales rose continuously into the 1910s and thus inspired continued domestic hop production. There were also extensive efforts to modernize the hop industry from within. These modernization and rationalization efforts set professional and scientific standards for the rest of the century. Beyond the land and farms, the work of professional businesspeople and scientists became the backbone of *Hoptopia’s* success.

---

25 This ad ran for several years and in many newspapers. For one example, see: *Washington Times*, August 9, 1908.

26 Similarly, Pabst ran this ad across several years and in many newspapers. For one example, see: *Washington Sentinel*, March 30, 1901.

27 Nancie Fadeley “Hopping Into History,” *Oregon Business Journal* (December 1990): 65. In this overview of the Willamette Valley hop industry, the author explained that “The J. W. Seavy Hop Company calendars carried a convincing anti-Prohibition message: ‘HOPS are so wholesome!’”

The Commercialization of Pacific Coast Hops

On the other side of the globe from Oregon, the continued expansion of two German companies signaled a new corporate era in the hop industry by the turn of the twentieth century. Joh. Barth and Sohn of Nuremberg and Simon H. Steiner of Laupheim did for the hop what Andrew Carnegie did for steel and Gustave Swift did for the meatpacking industry in the United States. Respectively started in 1794 and 1845 as small trading firms, Barth and Steiner vertically integrated throughout the nineteenth century to include new crops, storage facilities, and access to brewers. They utilized the tactics of industrial era big business to monopolize much of the European hop market. They streamlined international hop markets and better connected brewers from around the world to the central hop growing regions in Germany, Belgium, and England. Seeing rapid expansion in the United States brewing industry, both companies also established offices in New York in the late 1800s.29

By the early twentieth century, Barth and Steiner stood alone as the world’s largest hop dealers. They provided breweries the varieties, quantities, and qualities of hops needed to keep pace with industrial era beer production. Given that global consumption of beer doubled from 125 million barrels per year to 250 million barrels between 1880 and 1910, the monopolization efforts of Barth and Steiner were substantial.

A modernizing and corporatizing beer industry required a modernizing and corporatizing hop industry.30

During the early twentieth century, however, Barth and Steiner did not have a hand in the Pacific Coast hop market. In the United States, their agenda centered on the importation of European hops for American brewers, not export of American hops. The door lay open for other entrepreneurs to fill a role that these leading hop dealers had carved internationally. Primed to walk through the threshold was Emil Clemens Horst, the German immigrant with a penchant for the business who superseded Ezra Meeker as a Pacific Coast “hop king.” From the late 1890s to his death in 1940, Horst borrowed business practices from corporate hop dealers and regional leaders. He became the Pacific Coast’s quintessential grower-dealer, acquiring land and planting 3,000 acres of hops in California, Oregon, and British Columbia. Furthermore, he established marketing and sales offices in Sacramento, San Francisco, Portland, Salem, Chicago, New York, and London. Not one to shy from self-praise, Horst nonchalantly remarked during a 1916 Congressional hearing that he was the “largest hop dealer in the world.”31 Barth, Steiner,


31 “Testimony of E. Clemens Horst to the Commission of Industrial Relations,” from The Seasonal Labor Problem in Agriculture, Industrial Relations: Final Report and Testimony submitted to Congress by the Commission on Industrial Relations, Vol. 5 (Washington, D.C.: Government Printing Office, 1916), 4923, 4926, 4931. The claim may be dubious, as Barth and Steiner’s holdings in Europe certainly competed with Horst’s in the United States. Furthermore, the German companies also seriously moved into the American market during the 1930s.
and a handful of English dealers may have disagreed with him. But the fact remained that his new standing in the Pacific Coast hop community changed the nature of the industry.

Emil Clemens Horst arrived in the United States from Germany in 1874 at the age of seven, coming from an educated and industrious family. In his early twenties, after schooling in New York, he managed a hop-dealing corporation with his brothers. The business folded in 1896. Soon after, Horst moved to San Francisco and established the E. Clemens Horst Company. He initially planted acreage in Yuba County, California and made such a remarkable impact on the community and economy that the postal service opened an office at a site they named Horstville in 1898. In the following years, he swiftly expanded holdings up and down the West Coast. By the second decade of the twentieth century, the company grew nearly ten percent of all hops grown on the Pacific Coast, including about twenty percent of the California crop and ten percent of the Oregon crop. The company netted nearly a million dollars a year, and employed thousands of individuals across the West, including its 500-acre hopyard in Polk County, Oregon.

Horst contributed to a new professionalism to the West Coast hop industry. Like Ezra Meeker before him, he acted as an agricultural supplier and offered loans to small farmers. Horst also became an invaluable source of knowledge acquisition and dissemination, both contributing to print media on hops at the time and introducing ideas

---

32 The Wheatland Historical Society, Wheatland (Chicago: Arcadia Publishing, 2009), 91. The book notes also that, “Horstville had company housing, a dining hall, a tent city for seasonal workers, and a company store where workers could purchase food and dry goods.”

and themes from outside of the region. In the Willamette Valley, Horst’s influence eventually surpassed the levels that Ezra Meeker attained. The key lay in his ability not only to increasingly sell his own hop acreage and negotiate contracts with the smaller growers for their harvests, but also to understand what international markets would buy Pacific Coast crops.\textsuperscript{34}

Horst’s initial success occurred because he understood that by the turn-of-the-twentieth century, hop cultivation in Great Britain was in decline. According to one English journal, amidst challenges with diseases and fickle markets, “The very risky character of hop cultivation has not only prevented the extension of hop cultivation in England, it is slowly contracting it.” The author highlighted what Horst and other growers already knew, suggesting, “[F]or some years past there has been a steady increase in the growth and production of hops in Oregon, which has now become, the principal hop-growing State in the Union.”\textsuperscript{35} The observations captured the fact that center of hop cultivation in the world was shifting. Horst knew that he and his fellow growers of the American West Coast were at the new center of hop growing. And he sought to exploit it.

Horst solidified a lasting influence on the Pacific Coast and global hop marketplace in 1904 when he negotiated an exclusive contract between Ireland’s Guinness Brewery and a large group of Oregon hop growers. Offering hops at a cost “appreciably less than the prices being charged by the English merchants” but “on par” in

\textsuperscript{34} Tomlan, 103; “E. Clemens Horst Called By Death,” 3.

quality, the deal set in motion a long-term commitment by the brewery. While his methods in outbidding well-known English suppliers may have been cutthroat, Horst cemented early his legacy as a champion of the Pacific Coast hop industry. Growers in Oregon may not have been savvy to the details of the negotiations, but they understood that working with the E. Clemens Horst Company was extremely beneficial.  

The Horst-Guinness deal underscored several trends, not the least being Horst’s new standing in global hop trading or the reality that Guinness drinkers from 1904 onward consumed Oregon hops in a blend with other European varieties. First, the deal demonstrated how English production had faltered by the first decade of the new century. With hop production down in Great Britain and beer production and consumption rising rapidly, the country’s brewers had to look elsewhere for hops. The Pacific Coast offered English varieties in great quantity and soon took over as the largest global exporter to British breweries. Second, the deal demonstrated that Pacific Coast hops were in the process of overcoming their perceived stigma in European brewing traditions, one that was particularly strong at the close of the nineteenth century. Many of these brewers in Europe or European colonies continued to view American hops as second rate and refused to use them, but others—for necessity or taste—became attracted to the Oregon  

---

product. To a certain degree, Horst’s efforts began in earnest the ability to market Willamette Valley hops as a brand. Third, Horst’s negotiations with Guinness revealed a new collective power for Oregon growers if they could organize together with the assistance of corporate entities. Such organizing activities on a smaller level—that had stopped and started from the 1870s onward—continued to fail without such a skilled leader. Although a substantial number of small growers were still unaware of the destination of their hops, Horst helped weave their livelihoods into the international culture of hops and beer production.

While Horst was the most recognizable leader of the Pacific Coast’s grower-dealers in the early twentieth century, he was not alone in the efforts to better commercialize and streamline an industry that depended heavily on small farmers. Several other individuals emerged to fill the hole that Ezra Meeker left upon his departure for the Yukon. Herman Klaber, the once purported “hop king” of Washington after Ezra Meeker, joined Horst in connecting regional growers to the international marketplace. He also spent considerable time lobbying Congress for changes to hop tariffs and vehemently fought against smaller growers that wanted to form cooperatives. Klaber might have achieved more if not for perishing in 1912 on the Titanic following a European hop-selling venture.37

In the Willamette Valley, several residents and companies engaged in professional leadership roles. Salem’s T. A. Livesley Company and Independence’s Krebs Hop Company both organized and contracted smaller growers to compete in the international marketplace. Independence, Oregon’s Willard “Arch” Sloper also became well connected to the regional hop industry not only in his efforts at growing and expanding his business, but also by introducing a number of labor-saving technologies. His “wire-trellis dropper,” patented in 1909, revolutionized the process of picking hops. He also invented a plow specific to hop cultivation. Later, in the early 1930s, his “automatic bailer” that operated like an elevator to process hops into standard bales, also saved labor.38

The most visible Willamette Valley-based grower-dealer, however, was none other than James Seavey, the son of Oregon pioneer Alexander Seavey. The family had a much different relationship to hops than did Emil Clemens Horst. Originally from England and after living in Maine for three generations, the Seavey family arrived in Oregon in 1850 with Alexander taking land under the Donation Land Act. An early focus on grains proved profitable for his family, but like many others they turned to specialty crops in the closing decades of the century. In 1877, the elder Seavey planted twenty-five acres of hops near the McKenzie River and the crop showed promise in procuring extra

---

income. From that point onward, he spread his land holdings throughout the Willamette Valley from Lane County in the south to Washington County in the north. He trained three of his sons, James, Jesse, and John, in the arts of agriculture and commerce.39

Upon their father’s death in 1908, the Seavey sons divided his land, and expanded their hop acreage. They became one of the largest and most successful hop-growing families in the Pacific Northwest. James, in particular, took control of 150 acres near his father’s original McKenzie River site, and quickly became the most successful. By 1912, he owned over 500 total acres in three counties of the Willamette Valley. More importantly in regards to the modernization and rationalization of the industry, Seavey opened a Portland office for the marketing and distribution of Oregon hops: the J. W. Seavey Hop Company. For several decades, it competed with the E. Clemens Horst Company and others in providing a major connection from Oregon growers to brewers around the world. His relationship with Willamette Valley growers, however, was more intimate as he had grown up in the farming communities. But that did not stop him from continual expansion and buying out other hop farms in the state. In 1912, Joseph Gaston noted in *The Centennial History of Oregon*, the company had become the “most extensive hop producer in Oregon, their business exceeding in volume and importance

that of any other growers in the state.”

Noted also was that, “James Seavey’s knowledge of hop cultivation was “accepted as authority.”

Together in the opening decades of the twentieth century, Emil Clemens Horst, James Seavey, and a handful of other grower-dealers became the new faces of an increasingly market-wise and commercialized Oregon hop industry. Their work stemmed not only from longtime experiences with hops, but also general West Coast agriculture and global markets. Observations of the California fruit and nut industries, for example, certainly provided ideas of how to market Willamette Valley hops. So too did their efforts in traveling abroad and interacting with other leaders of the global hop trade such as Barth and Steiner. Still, expertise and actions did not occur in a vacuum. The modernizing and rationalizing Pacific Coast hop industry also relied on new scientific programs concurrently emerging in the private world of brewing and public world of federally supported agricultural research.

**From “Studies in Beer” to “Hop Investigations”**

As much as hop growers and dealers sought to take control of their own destinies at the turn-of-the-century, specialists outside of the industry contributed to advancements in science and technology. In this period of modernization, the developments were a calculated matter of staying competitive in the global marketplace. Thomas Edison and

---

40 Gaston, 824.

41 *Ibid.*, 1092. Even though he remained solely in the Willamette Valley, Seavey was as interested as Horst in expansion. Charles Staley, a farmer from near Salem, recalled that Seavey’s company bought out his entire diversified farm and planted it in hops. After the purchase, Staley ended up working a short time for the company. See: Charles Staley, oral history interview with Mickey Peterson, April 2, 1982, Benton County Historical Society, Philomath, Oregon.
his colleagues in their Menlo Park, New Jersey facilities set precedents for privatized research and development in the closing years of the nineteenth century. At the same time university departments across the nation became more specialized, as the educated public embraced positivism, or the foundational belief that science held solutions to the world’s problems. The goals for both private and public sectors were to advance technology, industry, and the American quality of life. The American beer industry followed suit. The USDA also added its expertise to the development and marketing of specialty crops.42

The leading American brewers in the late nineteenth and early twentieth centuries—Anheuser-Busch, Pabst, Schlitz, and Uihlein—relied on the innovations of professional scientists on issues varying from chemistry to marketing, and in locations inside and out of their own brewing facilities. Louis Pasteur contributed one of the most important developments in the late nineteenth century, when his 1871 “Studies in Beer” provided the foundations of understanding yeast and fermentation. But not all advancements came from widely recognized scientists. For example, among the dozens of inventions inventor William Painter, of Maryland, developed was a superior seal for bottles in his crown bottle top in 1892. In general, according to historian Maureen Ogle, the new industrial brewing leaders of the late nineteenth and early twentieth century “dived into the age, gambling on new and untested technologies: artificial refrigeration, pressurized carbon injection, pasteurization, and automated bottling machines.” They created sophisticated laboratories and employed leading scientists from around the world

while at the same time expanded breweries with mechanically-powered machines and labor saving systems. The result of these initiatives in the United States was the unprecedented rise of the major American brewing companies that outcompeted smaller brewers in volume and costs, a trend that occurred throughout other American industries at the time. In 1880, there were nearly 3,000 breweries in the U.S. That number reduced by nearly half in 1910. The industrialization of brewing opened a new capacity for beer-making and new market shares across the country and abroad.43

By 1905, the New York Times reported of the brewing industry, “Constant progress has been made in various directions,” including “important advances of the brewer into the realms of science, as related to his business. The teachings of the various brewing schools and scientific stations have been extensively adopted and turned to practical account.”44 Advancements occurred rapidly amidst the scientific and technological innovations and in the formation of professional organizations. The American Brewers’ Academy (1880) and Master Brewer’s Association (1888) provided new research on beer-making and related agricultural products and published information for their members in magazines and journals. Standard German and British brewing publications remained the most widely read in the world, but the U.S. witnessed the beginnings of its own professional journal print culture. The American Brewing Industry Journal, the Yearbook of the United States Brewers’ Association, and American Brewer

43 Ogle, 55; See also: Martin Heidegger Stack, “Liquid Bread.”

became the mediums in which various players of the brewing industry, including agricultural producers, engaged in an interrelated knowledge exchange.

In the early part of the twentieth century, Emil Clemens Horst contributed to the new brewing societies and journals more than anyone else in the American hop industry. While most of his published works concerned the history and future of his trade, he also offered his company’s land and hops for professional brewery research. In one 1904 study, for example, the E. Clemens Horst Company donated eighteen hop plants for judging on quality and effectiveness of fertilization. The brewing judges rated seven of the samples “very good” in terms of their overall appearance and chemical properties. It was a good sign. The collaboration pleased both hop producers and buyers in an era when brewers of the European traditions still discounted American hops. Horst’s efforts attracted positive attention to Pacific Coast hops, and at the same time generated feedback for future improvements in his fields. As the century progressed, such alliances continued to benefit both brewer and hop grower. They collectively determined what varieties of hops were useful and how best to cultivate, process, and store them. Still, private investment by the brewing industry in research specific to hop agriculture was minimal. Growers, dealers, and brewers looked to federal assistance, another crucial step in the modernization of the hop industry.45

The effort of the federal government to assist in scientific and technological advancements in agriculture dated to 1862, when Congress created a non-Cabinet level

USDA and passed the Morrill Act to create land grant universities. In both instances, the goal was to advance the nation’s citizens in the agricultural and mechanical arts through research and applied knowledge. But progress moved slowly. Congress did not create a cabinet-level USDA until 1889 and left research in land grant institutions underfunded until the Hatch Act of 1887. Only then did the federal government generate new funding for research in experiment stations connected to land grant universities.46

The USDA initiated the experiment stations with a specific role to offer research and education to farmers. With better funding and vision, the program adopted the motto of helping “people improve their lives through an education process which uses scientific knowledge focused on issues and needs.”47 The agricultural research stations aimed to improve crops in specific geographic and climatic regions for the benefit of general American farming. Much of the government’s research activity centered on cereals and other major crops, but they gave some attention to hops and other specialty crops on the Pacific Coast.

Oregon’s agricultural experiment station in Corvallis officially began hop research in 1903 after the federal government had already funded hop studies around the nation. The Government Printing Office released several circulars on the international

46 For more generally on these development and impact of these acts, see: Coy F. Cross, Justin Smith Morrill: Father of the Land-Grant Colleges (East Lansing: Michigan State University Press, 1999); Ralph D. Christy and Lionel Williamson (eds.), A Century of Service: Land-Grant Colleges and Universities, 1890-1990 (New Brunswick, NJ: Transaction Publishers, 1992). For the impact more specifically in Oregon, see: Oregon Agricultural Experiment Station, 100 Years of Progress: The Agricultural Experiment Station, Oregon State University, 1888-1988 (Corvallis: Oregon State University, Agricultural Experiment Station, 1990).

hop trade and U.S. participation. One of the first publications was an 1891 pamphlet simply entitled “Agricultural: Hops,” followed by others including “Hop Cultivation in Bohemia” (1899) and “Hop Culture in California” (1900). Although offering only a handful of pages with statistics on production in the growing regions, the works demonstrated a collaborative ambition on the part of American producers and government to compete with older more established growing regions in the world.\footnote{Later publications from the Government Printing Office included “Growing and Curing Hops” (1907), “Hops in “Principal Countries: Their Supply, Foreign Trade, and Consumption, with Statistics of Beer Brewing” (1907) and “Necessity for New Standards of Hop Valuation” (1909) that further demonstrated a new attention to the expansion of American hop growing and increased market shares for the nation, including Latin America and East Asia.}

The experiment station at the Oregon Agricultural College in Corvallis (predecessor of Oregon State University) engaged in Oregon’s first federally sponsored hop research project. The program included fieldwork that integrated local growers, including test acreage in James Seavey’s hopyards. Unfortunately, the efforts failed to produce useful conclusions within the first several years. In his annual report to the USDA for 1911, Oregon Experiment Station director James Withycombe highlighted chemical studies of hop lupulin and related issues of kiln drying hops to preserve essential resins. Recommendations for growers included using steady heats of 300 degrees for drying with slow turning ever six hours and adding sulphur for uniformity.\footnote{Oregon Agricultural Experiment Station, \textit{100 Years of Progress}, 29-31; James Withycombe, “Report of Office of Experiment Stations. Oregon,” \textit{Annual Report of the Office of Experiment Stations For the Year Ended June 30, 1911} (Washington D.C.: U.S. Department of Agriculture, 1911), 182.}

The experiment station’s first major published report was a 1913 bulletin entitled “Hop Investigations.” Its contents focused on work from the institution’s experimental hopyard
in Corvallis and collaboration with James Seavey. Though the report discussed research surrounding qualities of hard and soft resins and the methods of kiln drying, most conclusions were fairly innocuous. One main recommendation, for example, noted, “Of all the fertilizing materials which have been used in the Willamette Valley, ordinary barn-yard manure seems to give the best results.” The strength of the report lay in its recommendation for growers to seek better quality control standards and for the experiment station itself to continue researching.

Although slow to generate useful conclusions from their hop research, Oregon’s agricultural experiment station successfully established lasting relationships with similar programs across the world. The most important of these was England’s Wye College. In 1906, under the direction of plant pathologist E. S. Salmon, researchers there initiated the world’s first and most successful hop breeding program. Members of the hop and brewing industries saw the activity as essential to their futures, and were overjoyed in 1919 when Salmon bred his first successful hybrids, the product of English and North American parents. With desired traits that demonstrated disease resistance, higher yields, and adaptability, they appealed to farmers and brewers. Salmon released the two new hops in the early 1930s as “Brewers Gold” and “Bullion.” They offered promise to the dwindling English industry and other growers around the world facing a range of hop diseases. It also offered promise for continued success at Wye College and other fledgling research programs across the world, including the one in Corvallis. Salmon himself immediately gained notoriety as the father of modern hops and gained esteem

throughout the first half of the century when he released additional hybrids, including the “Northern Brewer” variety developed in 1934.\textsuperscript{51}

In general, American advancements in hop breeding and research lagged behind the English because brewers, growers, and scientists did not have a unified agenda. Brewers wanted to learn more of hop qualities specific to brewing, while the government and hop industry wanted to find ways to improve methods of cultivation, storage, and dealing with the threats of pests and disease. This disconnect was visible in the discussions and publications of brewers, including a 1907 issue of \textit{Transactions of the American Brewing Institute} that suggested bluntly, “There are many difficulties in the way of the government making these investigations. In the hop investigation apparently we have been unfortunate.”\textsuperscript{52} The main problem, the author noted, was the inability to get the federal government to support the American cultivation of the European noble varieties, not just the English Clusters that dominated the agricultural landscape. Efforts failed even after consultations with renowned Santa Rosa-based horticulturalist Luther Burbank to at least seek European-American hybrids. In 1907, Burbank claimed, “The hop should be a most promising plant on which to carry on…experiments in selection.”\textsuperscript{53} The inflexibility on the part of growers rested in their propensity to growing the English


\textsuperscript{52} “Fifth Anniversary Dinner of the American Brewing Institute,” \textit{Transactions of the American Brewing Institute} Vol. 3 (Sept, 1904-September, 1907): 124.

\textsuperscript{53} “Fifth Anniversary Dinner of the American Brewing Institute,” \textit{Transactions of the American Brewing Institute}, 124.
Cluster varieties for their high-yields, as opposed to the noble varieties grown in continental Europe. Nevertheless, the Pacific Coast hop industry flourished for the time being and would continue to do so. Agricultural sciences and new technologies rapidly advanced in the twentieth century and the Smith-Lever Act of 1914 expanded the role of cooperative extension. Later in the century, Corvallis became a major center for hop research and breeding.54

Continued Promotion Meets a Prohibition Roadblock

Amidst the corporatization and new science connected to the broadening commercialization of Pacific Coast hops in the early twentieth century, Oregon boosters latched onto the same narrative as their predecessors and 1905 world’s fair organizers: Oregon’s “natural bounty.” Hops added to the crop varieties produced in the agricultural utopia of the Willamette Valley. Perhaps most importantly, hops highlighted the state’s economic success. Promotional literature captured these ideas and eagerly anticipated new technologies and advancements in transportation for further success.

In 1903, A Sunset article reported, “While Oregon hops are already a factor in the markets of the world, the day is not far distant when the industry will have attained gigantic proportions, and he who owns a hop field will have his hand on the lever that moves the world’s financial wheel.”55 Two years later, The Benton County, Oregon: Illustrated elaborated on the “agricultural possibilities of the country,” and noted

54 For the financial impact of the Smith-Lever Act, see: Gardner, American Agriculture in the Twentieth Century, 182.

specifically, “Hops of the finest quality are grown, and the annual yields prove conclusively that this crop can be grown at a minimal cost. Four hundred acres of yards in the county produced last year 300,000 pounds of cured hops, nearly all of which rate first class.”56

The Benton Country piece also spoke to the importance of the expanded marketplace, explaining the urban role in marketing “the Wolf of the Willow” among other crops. The author noted how Portland (a city of 100,000 by that time), which rests at the confluence of the Willamette and Columbia rivers, became the launching point of regional agriculture for destinations across the nation and the world. “It has lines of steamships to all Alaskan points,” the text noted, and “also to San Francisco, Honolulu, Yokohama, Hong Kong and Manila.” After explaining the various railroad connections via the Southern Pacific and Northern Pacific, the text finally suggested:

Through its ocean service it has large and growing trade with Alaska, Mexico, Central and South America, the Sandwich Islands, Philippine Islands, China and Japan. It does a large and lucrative business with Europe and the Atlantic Seaboard which will be quadrupled when the Nicaragua Canal is completed.57

Indeed, as railroads continued to expand and quicken their pace, and the Panama Canal opened faster shipping between the American West Coast, Europe, and Africa, specialty crops continued to expand. This played into the favor of Willamette Valley hop growers who took a greater hold on global hop production.

Into the 1910s, the sentiments remained. Joseph Gaston, in his Centennial History of Oregon (1912) captured the momentum when he noted:


57 Woodson, Benton County, Oregon, 35.
Allowing a pound of hops to the barrel of beer, Oregon is now producing hops enough to produce yearly thirty million barrels of beer; or 30 barrels for each man, woman and child of the State. But only a small amount of the hop crop is converted into beer in Oregon, and not one fourth of what is produced here is consumed by people of the State. Nearly all of the Oregon hop crop is shipped to the eastern states or to foreign countries; while the Oregon breweries ship probably half their brew to the Philippines, Hawaii, Alaska and British Columbia.  

The world’s fair organizers of 1905 and all individuals counting on the success of hops would have been proud to see such advancement by Oregon’s farmers in a few short years. The attention was unparalleled in other agricultural enterprise and genuinely solidified hop culture as a distinguishing feature of the Willamette Valley’s agricultural identity.

At the same time as insiders and outsiders alike praised the Oregon hop industry, however, American public opinion began seriously entertaining the possibility of banning the production and sale of alcoholic beverages. Agricultural and industrial producers feared what this might mean for their livelihoods. The Willamette Valley’s identity as Hoptopia was threatened.  

The Path of Prohibition and the Hop Industry’s Response

At the beginning of the twentieth century, anti-alcohol reform in the United States already entailed a long history. Historian W. J. Rorbaugh dates the first efforts to the

---


early the nineteenth century, a time when “the typical American annually drank more
distilled liquor than at any time in history.”⁶⁰ Wine, hard cider, and to some degree beer
also contributed to what he called the “alcoholic republic.” With abundant corn resources
to make whiskey, stills made ready a continuous and copious supply of drink. Hard cider
also proliferated west of the Appalachian Mountains, following mass apple tree plantings
by John Chapman (more famously known as Johnny Appleseed).⁶¹ By the 1820s, the
nation’s first temperance movement surfaced in the wake of these trends. Christian and
women’s groups sought protection for families shattered by neglect and abuse from their
alcohol-consuming husbands and fathers. Others joined the temperance movement with
nationalistic motivations, fighting against perceived economic, social, and moral
consequences of drunkenness. During the 1850s, the efforts of local organizations and
national leaders such as Susan B. Anthony and P. T. Barnum proved effective. Maine led
the charge with the complete prohibition of the manufacture and sale of alcohol in 1851,
and other states passed similar laws before the Civil War diverted attention elsewhere.⁶²

New immigrant populations further diluted the nation’s first temperance
movement. Alcohol played an important role in German, Irish, and Italian culture, and
these peoples generally objected to prohibition. Additionally, German immigrants
brought brewery skills and introduced a new form of alcohol to satiate the nation’s thirst
for booze: lagerbeer. The light-tasting, bottom-fermenting beer—opposed to heavier-

University Press, 1979), 7.

House 2001), 21-22.

tasting, top-fermenting ales—became the nation’s new beverage of choice as German breweries arose in the Upper Midwest. Consumers appreciated the lighter qualities of the beer, and doctors even claimed that its lower alcohol content did not produce an intoxicating effect. As a result, lagerbeer became a widely accepted alternative to stronger alcoholic beverages. It also helped that the beverages were easily accessible and cheap. Still, despite the introduction of lagerbeer that reduced consumption of harder liquors by the 1860s, prohibition organizations continued their campaigns. As the world became increasingly urban and industrialized, reformers not just in the U.S. but also in Great Britain, Scandinavia, and Australia fought against alcohol. They believed that any beer, wine, and spirits of any kind contributed to the erosion of work ethics, morals, health, and nationalism—particularly in the lower, and often immigrant classes.63

Historians have provided various reasons for the successful passing of the Eighteenth Amendment in the early twentieth century. Some have argued that urban capitalists fought for a ban on alcohol to improvement industrial output reliant on sober wage earners.64 Others have argued that the prohibition movement was a social and political product of its times related to gendered power. “Both woman suffrage and prohibition,” one historian notes, “emphasized male excess and potential female redemption.”65 Suffrage and prohibition were the two largest arenas in which women sought change in an era when women had more access to education and the workforce.

63 Rorabaugh, 109-110.


Aside from these arguments, historians have also suggested that proponents of temperance envisioned a more morally and economically secure nation.\textsuperscript{66}

In 1914, with prohibition efforts ratcheting up during the first years of Woodrow Wilson’s Administration, Congress held its first and largest public hearing on the subject. After marches and organizational meetings held individually in the streets of Washington, a range of speakers took to the Capital for thirteen hours of the prohibition debate that reached all angles on industrial capabilities, women’s rights, moralism, health, and nationalism.\textsuperscript{67} The sticking points of the ongoing dialogue, however, actually had little to do with these perceived problems. At the same time that the congressional hearings commenced, the Great War broke out in Europe. Although it would be three years before the U.S. entered the war, a strong anti-German and nativist sentiment resounded across the country, playing to prohibition efforts because the majority of American brewers were of German descent. As the United States moved closer to war, anti-immigrant and prohibition sentiments heightened. So too did a Wilson Administration philosophy that Americans needed to protect food resources, not divert them for use in beer. In the end, the debates in Congress turned more toward anti-German sentiment than anything. Noticeably absent from all of the discussion were the agriculturalists—growers of grain and hops—whose livelihoods were intertwined with the alcohol industry.

\textsuperscript{66} Rumbarger, \textit{Profits, Power, and Prohibition}, 1-10.

\textsuperscript{67} United States Senate, Committee on the Judiciary, \textit{Proposing an Amendment to the Constitution Prohibiting the Sale, Manufacture, and Importation of Intoxicating Liquors: Hearings Before a Subcommittee of the Committee on the Judiciary of the United States on S. J. Res. 88 and S. J. Res. 50, 63\textsuperscript{rd} Cong., 2\textsuperscript{nd} sess., 1914} (Washington, D.C.: Government Printing Office, 1914), 31-76.
Amidst the fighting over morality, women and family rights, and nativism in Congress, there was another voice in the prohibition battle. The fight for prohibition on the state and national levels left Oregon hop producers frustrated, particularly after overcoming various international stigmas and creating substantial contracts in the first decade of the new century. Although many local hop-raisers were German, the makeup of growers was ethnically diverse, discounting any problems of nativist persecution. The larger issue was prohibition. Facing the potential collapse of the domestic outlet for their goods, hop-raisers abandoned other political agendas, namely longstanding issues of unionization and tariffs, to fight prohibition legislation. Their main hope rested in gathering important political leaders to fight for their cause. As early as 1908, organized Oregon growers penned a petition for Oregon senator Charles William Fulton noting, “We, the undersigned growers and dealers in hops, petition you to do all in your power to oppose present hostile legislation affecting brewing interests…Consider these, if passed, ruinous to the hop industry of Oregon.”

Californian counterparts also wrote to their Congressman Duncan McKinlay, “calling upon him to…keep the country from going dry by opposing the Prohibition movement now before Congress.” As a protective measure, Pacific Coast growers collectively decided to reduce acreage and sell off the previous season’s crops from the storehouses by the mid-1910s.

---


69 “Hopgrowers Call For Fight on Prohibition,” Oregonian, March 8, 1908, 3.

70 Tomlan, 38-39.
At the same time, industrial brewers such as Gustave Pabst called upon cultivators of corn, rye, barley, and hops to join him in the fight against prohibition. “The continued growth of prohibition and the destruction of the brewing and distilling industries,” Pabst wrote in an address of 1908, “will result in the allied trades in all lines of manufacture being made to suffer great losses through the destroyed market for their product.” In the next several years, farmers across the country joined brewers in protesting state and national prohibition, and, despite eventual defeat, appreciated the efforts of families like Pabst and Busch. Several anti-prohibition organizations formed and voiced their opinion in publications. The National Wholesale Liquor Dealers Association of America informed readers not just of the economic and social consequences of becoming dry, but also the historical. They emphasized that George Washington and other founding fathers distilled liquor. Other organizations, such as the United States Brewer’s Association declared that a national prohibition would lead to the rise of an underground trade and a rise in crime. As convincing as the range of anti-prohibition arguments were in hindsight, the pleas did not work. With the approval of suffrage in many states, the prohibition movement grew.


73 For the success of women’s suffrage on the local and national levels, see: Rebecca J. Mead, *How the Vote Was Won: Woman Suffrage in the Western United States, 1868-1914* (New York: New York University Press, 2004); Allison L. Sneider, *Suffragists In an Imperial Age: U. S. Expansion and the Woman Question, 1870-1929* (New York: Oxford University Press, 2008). For the role of the initiative system, often called the Oregon System after contributing founder of
On November 3, 1914, Oregon voters approved the statewide prohibition of alcoholic beverages with a vote of 136,842 to 100,362. Although hop growers made final pleas to the state before the legislature finalized the law in 1916, the production, sale, and consumption of alcoholic beverages in Oregon became illegal four years before the entire nation went dry. A last minute appeal by Salem’s J. L. Clark outlined the situation best as it affected state farmers. First and foremost he explained the financial impact. “Since the beginning of the hop industry in Oregon,” he noted, “more than $65,000,000 has been returned to local growers. In 1914 alone more than $6,000,000 was added to the income of the state from this industry and some 50,000 men and women participated in the income through employment offered them in picking the crop.” He saw the collapse of the industry resulting in the decline of state income to $2,000,000 in the following years. The economic consequences reverberated from farmers and dealers to shipping companies and seasonal laborers. Beyond this economic concern, Clark also recognized the historical importance of the industry when he suggested: “Through hard and consistent work Oregon has gradually climbed to the lead in the hop industry of the


75 “Notes Relating to the Brewing Industry,” *Scientific Station for Pure Products, Pure Products* 12, no. 1 (January 1916): 450.
United States. This supremacy will, however, no longer be possible unless present
conditions are changed.”\textsuperscript{76}

With potential for world war escalating, the pleas of those on behalf of the Pacific
Coast hop industry had little impact. In the end, even the fight by industrial leaders,
women, and Christian groups would not be as a powerful motivator as the course of
world war. Congress passed the prohibition amendment as a wartime measure to divert
agricultural resources, particularly grain, away from the alcohol industry and to supplying
efforts of American soldiers and their allies. American agriculturalists, they argued,
should be aiding war efforts, not contributing to the vice trade. Additionally, as Charles
Steltzl, a Christian prohibition leader, even suggested, beyond money and morality,
“There never was a time when America so needed her sober senses as to-day—it is a time
when selfishness must be subordinated to the great task of winning the war.”\textsuperscript{77}

\textbf{Hops in Wartime and After}

After a long fight, Oregon hop-raisers realized that prohibition was inevitable in
the second decade of the twentieth century. Hundreds of famers abandoned the industry
in favor of other crops. After all, the local market was destined to shut down after the
1914 vote and increasingly signs pointed to a similar fate for domestic brewers. To make
matters worse, labor became scarce as many families no longer wanted to associate
themselves with beer-making. In 1915, these trends led to Oregon’s demise as the

\textsuperscript{76} “Notes Relating to the Brewing Industry,” \textit{Scientific Station for Pure Products, Pure Products}, 450.

national leader in hop production. California, which had not enacted prohibition and had a larger population for brewers to sell their beer, seized the position.\textsuperscript{78}

At the same time that prohibition laws took hold in Oregon and in other states across the U.S., Europe faced war. Tanks, machine guns, and artillery destroyed the lives of soldiers fighting on both sides. They also devastated the natural environments of northern Europe, including productive agricultural lands. For this reason, Allied governments realized that food production was an essential aspect of their war effort. The U.S. arrived at this conclusion, too. Soon after Americans joined the Allied war efforts in April of 1917, the nation embraced the slogan “Food Will Win the War.” The federal government redirected production of grain from the brewing industry and farmers diverted their land to cultivate food for victory. Hop farmers halved their acreage across the United States in favor of food crops.\textsuperscript{79}

In Oregon, the onset of prohibition inspired many hop-growers to replant their yards with other crops. As world war approached, others growers followed suit, including the larger grower-dealers of the era. Speaking for the region, Emil Clemens Horst summed up the situation, “Owing to war conditions, the acreage formerly devoted to hops has been greatly restricted and these lands are now used for the growing of vegetables.” As it turned out, hop-growers were prepared to make this conversion better than other farmers because hop driers required very little labor to convert into vegetable

\textsuperscript{78} Tomlan, 30-39.

\textsuperscript{79} Barth, Klinke, and Schmidt, \textit{The Hop Atlas}, 15. As the text notes, “Beer consumption worldwide was more than halved. Parallel to this development, hop acreage in Germany came down from 68,500 acres in 1914 to 22,000 acres in 1918, and prices were hovering at or below cost of production level with the exception of 1918, the year of a complete crop failure.”
driers, a new value-added commodity industry in the country. Horst captured the meaning of this boon both for the benefit of the region’s agricultural economy and war efforts when he noted:

Dried vegetables, although not new to European countries, were practically unknown to this country until the advent of the war. There are now ten vegetable drying plants in California and Oregon, and more are under construction. A great impetus was given to the industry when the War Department contracted $1,000,000 worth of evaporated vegetables for the use of the soldier abroad. 

The change for hop-raisers certainly eased the impact of state and impending national prohibition on Oregon hop growers. Thus, besides the thousands of Oregon soldiers who faced duty during the war, the state’s farmers also saw themselves engaging in what they saw as a nationalistic duty of food production.

After the Armistice in 1918, European countries turned inward to address social, economic, and health costs from five years of trench warfare. Scores of soldiers and civilians had died and landscapes lay ravaged. Nations sought to recuperate and rebuild. Oregon alone provided much of the timber to rebuild war torn areas in Belgium and France. The productive agricultural lands of the Willamette Valley also contributed to food supplies. In a peacetime era when beer consumption again rose in Europe but the lands remained scarred, markets for Oregon hops expanded. One reference in 1919 explained how England used mostly Oregon hops: “The English production is scarcely ever sufficient for its needs, so that Great Britain must import some and mostly takes Oregon hops because they are especially adapted to the English ale brewer's

---

requirements."\(^\text{81}\) Another suggested, "The English demand for Oregon hops of the coming crop continues, and agents for London firms are offering 30 cents on contract. Only a small part of the Oregon and Washington crop remains unsold."\(^\text{82}\) Other nations took the English lead and began purchasing Oregon hops to rebuild their brewing operations.

American hop exports expanded even more in the early 1920s when the European economy regained footing and looked outward for ingredients used in brewing. Abstemious critics chided the growers for producing a beer-related crop in a time when American prohibition prevailed. But the voices fell on deaf ears as they had two decades prior. The international need for hops allowed Oregon to increase production beyond the needs of near beer and nutritive tonics available by breweries in the Prohibition Era United States. The state reemerged as the leading national hop producer and a major contributor to the global market by 1922. For the rest of the decade as European countries rebuilt hop acreage, the industry in Oregon grew.\(^\text{83}\)

Other developments also aided Oregon’s reemergence as a major hop producer. In 1926, a devastating disease called downy mildew swept across Europe’s traditional hop-raising areas. As one source notes, “The year…went down in hop history as ‘the year of


\(^\text{83}\) Tomlan, 32. Near beer is today’s equivalent of non-alcoholic beer; nutritive tonics were essentially regular light beer, but could only be prescribed by doctors for various ailments such as stomach problems.
downy mildew’. Peronospora destroyed a good part of the German hop crop, particularly in the Hallertau district.”

For these reasons, the Oregon and Pacific Coast hop industry actually began to **thrive** in Prohibition years because of the demand from Europe. Just ten years after Oregon implemented prohibition and the Great War stymied hop production in favor of vegetables, events worked to revive the region’s hop industry. The development is particularly remarkable, because hop-raising gained value in a decade where American agriculture as a whole declined prior to the Great Depression.

In 1927, American economist Herman Feldman analyzed the trends of the nation’s grain and hop-growers after the war and the initiation of Prohibition. “According to an authority in the hop industry,” he explained, “the relative proportion of hops used in beer is about 1 part hops to 100 parts cereals. Hence, the hop acreage affected by American liquor restrictions is almost negligible.”

He then illustrated how American hop production occurred at levels similar to pre-war and pre-prohibition periods. Although the foreign market was still volatile, Feldman’s figures proved accurate. Despite a drop in production during the 1910s, the Pacific Coast hop industry fared significantly better than once feared. His evidence, however, did not come from hard

---


numbers alone. They also came from authoritative voices in the industry. In his final note, Feldmen relayed an exchange with the region’s leading grower-dealer. “E. Clemens Horst, of California, one of the world’s greatest hop growers,” he explained, “writes us that the hop growers have been prosperous during prohibition.” Feldman concluded: “You may dry your tears for the ‘poor’ hop grower.”

“Happy Days Are Here Again”: The End of Prohibition

Despite increasing their presence in foreign markets during national prohibition, Pacific Coast hop-raisers still sought a domestic outlet for their produce beyond the minimal amounts that brewers used in producing near beer and nutritive tonics. Consequently, they looked forward to the end of national prohibition. Global economic depression in 1929 heightened this desire when it became unclear if European brewers would even stay in business and honor their contracts. Economic uncertainty in the opening years of the Great Depression inspired a popular rethinking of the Eighteenth Amendment in the United States, even in those states that had enacted prohibition laws earlier than the national mandate.

In the election year of 1932, “Happy Days Are Here Again,” a pro-liquor song composed by Milton Alger and Jack Yellen in 1929, blared from radios across the country as Franklin Roosevelt’s campaign anthem and the anthem of the repeal cause. In the midst of the Great Depression, the song optimistically declared:

So long sad times, go long bad times
We are rid of you at last.

Howdy gay times, cloudy gray times,  
You are now a thing of the past.

Happy days are here again  
The skies above are clear again  
So let’s sing a song of cheers again  
Happy days are here again.

The song reflected faith in Roosevelt’s vision, a new source of taxes to fund his New Deal programs, and the renewed freedom to legally imbibe alcoholic beverages. The pages of agricultural journals, including the newly founded *Pacific Hop Grower*, published in San Francisco, pleaded to its readers to vote for repeal.88

By November, the nation turned its eyes to anti-prohibition developments. *The New York Times* reported the news closely, noting, “Early reports indicated that Oregon’s prohibition law might be repealed…The vote in Oregon was the heaviest on record.”89 More importantly at the time, Oregonians joined a majority of other states that sought change, and cast their five electoral votes for the Democratic governor of New York, Franklin Delano Roosevelt, who won in a landslide. In April of 1933, Roosevelt legalized beer produced at 3.2 percent alcohol as one of his first presidential actions. Then, citing economic stimulus to create new jobs and acquire alcohol taxes, he sought broader repeal of prohibition throughout the year. Oregon hop-raisers, among millions of other people across the nation, collectively cheered on December 5 when the newly signed Twenty-First Amendment ended prohibition. The brewing industry and its agricultural producers

88 Sidney Jackson, *The Oregon Hop Grower*, May, 1933. For his efforts in repeal, the cover of the June 1, 1933 issue of the journal honored President Roosevelt with a heroic image.

89 *New York Times*, Nov. 9, 1932, 3.
could once again thrive with a domestic market; the American public could turn to a cheap beverage in depressed times.\footnote{The experiment in Prohibition was underscored by such things, as one opposition group suggested, including “corruption,” “failure of enforcement agents,” “prevalence of moonshine,” general “lawlessness,” and, indeed economic consequence; see: The Association Against the Prohibition Amendment, \textit{A Criticism of National Prohibition} (Washington, D.C.: The Association Against the Prohibition Amendment, 1926), 21-30, 52-54.}

In the midst of the Great Depression, the end of prohibition created jobs for brewers, sales agents, deliverymen, and, of course, agricultural producers of grain and hops. The most noticeable impact was on the brewing industry. American beer production increased rapidly with the ratification of the Twenty-First Amendment. By 1935, the United States overtook Germany and Great Britain by producing annually over 10 million barrels of beer.\footnote{John. Barth & Sohn, “Hop Report for 1935/36,” Nuremberg, Germany, July 14 1936, 3.}

Clearly the reemergence of a domestic market also benefitted Pacific Coast hop growers, and nowhere more than Oregon. Cultivated areas in the state increased from 15,500 acres in 1932 to 23,000 acres in 1934. By 1936, Oregonians harvested over 26,000 acres of hops, the most in the state’s history. The acreage devoted to the specialty crop was more than most other countries, including Germany. Only Czechoslovakia devoted more land to the crop than Oregon, and that was only by 1,000 acres.\footnote{John. Barth & Sohn, “Hop Report for 1935/36,” 3.} Amidst the expansion of hop agriculture was also an expansion of dealers and other related agricultural companies. In Oregon F. E. Needham and his Needham-Taylor and Company emerged as new players in Salem. In Washington State, John A. Hass emerged in the
Yakima Valley. To borrow a phrase from Ezra Meeker, the “palmy days of ‘49” returned once again.93

The rapid expansion of hop-raising in the 1930s inspired fear among industry experts of depressed prices and low-quality hops entering the marketplace. But this era of growth was different than those of the 1880s or 1910s. Having taken early steps toward modernization and rationalization prior to prohibition, Oregon hop-raisers were better equipped to compete in the global marketplace. During this period, those in the industry took the final steps to these ends that had begun at the turn of the century. Corporate hop dealerships increased in number and expanded, and transnational companies invested in their own Oregon hop yards. The most notable was the Wigrich Ranch near Independence, created by two English hop merchants. Scientific inquiry also intensified at the Oregon State Agricultural College, with the expansion of hop research under crop scientists E. N. Bressman. Furthermore, growers Emil Clemens Horst and Arch Sloper implemented new and improved labor saving technologies, employing the electric bailer and mechanical picking machine that signaled the arrival of a new era in cultivation and processing after World War II.94


94 “Oregon Hop Men View Robot Picker,” The Pacific Hop Grower, November 1938, 3. The Oregon Hop Grower, July 1934, 7. “An Automated Baler,” Pacific Hop Grower, July 1934, 7. This article noted, “An electric hop baler has been developed by Mr. Arch Sloper, well known hop grower of Independence, Oregon, that is said to possess exceptionally good operating characteristics and bids to be a popular product for hop farms having a need for a mechanical press.”
The clearest signal of growing organization to meet market demands in the era, however, was the gathering of Pacific Coast hop growers as a unified body. Attempts dating back to the 1880s saw little success. But given the economic uncertainty of the 1930s, regional growers recognized the need to collaborate for price controls and the larger dissemination of knowledge that affected their livelihoods. Agriculturalists, in general, also saw the rewards of 1920’s legislation that gave special privileges to agricultural cooperatives in terms of marketing and buying goods and fuel for resale at lower prices to members of the cooperatives. Their main agenda was the continued exchange of knowledge and improved recognition as a modernizing industry of importance in the local and international economy.

In 1932 Oregon became the first state to organize a hop grower’s association. California and Washington followed in the next years. To reach their audience and members, the three state associations began publishing *The Pacific Hop Grower* (which ran as *The Oregon Hop Grower* for the first year). Dean H. Walker, the first president of the Pacific Coast Hop Association, captured the problems that the collective group hoped to address:

> The hop grower has suffered severely in the past from lack of organization. A strong individualist, the hop grower fought his own battles in his own way, when he saw that it was a losing fight. A year ago the Oregon Hop Growers association was formed and what this association has accomplished in one year is enough to convince even the most sceptic [sic] as to the value of cooperation in fighting for growers’ welfare.95

His words struck a chord with other growers, not only because of the lack of recognition of former failures in such ventures, but also because they recognized that, after repeal of

---

95 Sidney Jackson, *The Oregon Hop Grower*, May 1933, 2.
prohibition, the expansion in hop acreage would inevitably bring the price down and hurt the industry.

Amidst these developments, problems in the industry remained. On the one hand, as geographer Paul Landis noted in a period study, even in the 1930s after many American and European companies had turned to hops grown in Oregon and the Pacific Coast, “the market for American hops has been unnecessarily limited because many American brewmasters, being of German birth, believe that foreign hops are superior.” Also, because hops are a small percentage of finished beer, “breweries are willing to pay a higher original price…in order to obtain foreign hops.”

The creation of an American Hop Promotion Board aimed to educate “American brewmasters concerning the merits of domestic hops” at this time, but little headway was made. Furthermore, even though scientific work continued at the Oregon Experiment Station in Corvallis, there was little progress toward developing specific varieties for the region or combating pests and disease—a reality that would have a tremendous impact in the near future.

Early efforts of the new hop grower associations included the continued fight against the perceived inferiority of American hops from brewers trained in European brewing schools. As Oregon grower C. F. Noakes noted, the matter was not just about the varieties being grown, but also concerned the quality control during harvest. Inclusion of stems and leaves in hop bales persisted as a problem from the 1870s onward. In 1933, Noakes suggested, “Oregon hops received so bad a reputation from the terrible picking that was done during the few years after the war that some English brewers still refuse to

---

96 Landis, “The Hop Industry”: 86.

97 Ibid., 87.
have anything to do with our hops.” He went on to note that across the board growers needed to enforce their workers to pick the hop cones clear of stems and leaves and cultivate them more carefully. Arguing that the fifty-year-old quality control checks were dated and that no other agricultural industry would approach their produce in such fashion, he suggested:

Look around you, at Hood River apples, known and bringing top price in every market of the world. Go to your local store and ask for Tillamook cheese. The merchant will ask you for four or five cents per pound more for this cheese than other good cheeses. Why? The answer is quality goods of high guaranteed uniform standards. 

Although immediate fixes were not always evident, the conversation continued throughout the decade. Apparently, despite advancements made by Horst and Seavey in selling Willamette Valley hops as a brand, problems remained.

Beyond the ongoing issues of stigmatization and quality control, the agenda of the new hop growers association was largely economic instability. Soon after the formation of the Pacific Coast Hop Association, plans began for price control with similar notions as other agricultural industries during the Great Depression. A 1934 article highlights the sentiments of the association leaders, noting:

Hop growers of the Pacific Coast are standing at the cross roads…One road leads to production control, through control of hop root sales, which in turn will lead to years of continued prosperity to the hop grower by insuring him a price for hops that will give him a fair return on his investment…The second road leads to unrestricted production, with the inevitable cycle-more hops, less money, and finally a bitter ‘survival’ period which will force hundreds of hop growers into bankruptcy and reduce acreage.

---


100 “Hop Root Control Vital,” The Pacific Hop Grower, March 1934, 2.
The implications of the article became clear to Pacific Coast growers. They needed price controls. As a result, they worked together to preserve their industry by taking advantage of the New Deal agricultural programs available for hops.

Over the course of a few short years, West Coast growers championed a federally sponsored marketing agreement. Having failed to enact one in the previous decades, and facing competition from British growers who had put one in place in the mid-1930s, the Pacific Coast growers turned to Congress. They used a provision in the New Deal’s Agricultural Adjustment Act that sought to control prices based on reducing agricultural production. In 1937, Dean Walker emerged as the chairman for the related Congressional sessions. Although hops were a specialty crop, and often overlooked in the New Deal programs compared to staple crops, the legislation proved successful. Congress included the legislation marketing agreement plan and explained, “As hops under ordinary barn or warehouse storage deteriorate rather quickly in brewing qualities, sound marketing practices to prevent large surpluses become necessary.” The language also suggested, “The hop industry is faced with a serious and discouraging outlook, but one that does lend itself to a sound marketing program.”

As explained to the readers of The Pacific Hop Grower after the marketing agreement passed, an elected board:

Economics…in establishing grades and standards, hold a surplus, and…give reports to dealers and growers.\textsuperscript{102}

In a word, the new Industry Board would achieve many of the goals that larger growers had sought in the previous several decades of failed organization.

In 1939, the \textit{Pacific Coast Hop Grower} explained the new marketing agreement so elusive during the previous fifty years: “The first order approved August 11, 1938, fixed 28,500,000 pounds as the quantity salable, without penalties…of 1938 hops, as against average annual production for the previous five years of some 40,000,000 pounds.”\textsuperscript{103} It was a victory for many. It was also a signal of change as in the next decade the base production allotments drawn up in the marketing agreement would push many out of the industry. Still, other issues proved more pressing.

\textbf{Downy Mildew Reaches the Willamette Valley}

In 1929, the dreaded plant disease \textit{Peronospora}, or downy mildew, unexpectedly migrated to the Pacific Northwest from Germany. The disease, which wilts hop vines and rots leaves, appeared in Washington first. By 1930 it reached the Willamette Valley. At first, downy mildew did not spread rapidly because even if a hopyard was affected, it would not necessarily destroy the entire crop. The reality changed as the decade progressed, despite efforts by the Oregon Agricultural Experiment Station to combat the disease.

\textsuperscript{102} “Marketing Agreement Completed,” \textit{The Pacific Coast Hop Grower}, December 1934.

\textsuperscript{103} \textit{The Pacific Coast Hop Grower}, September 1939, 2.
In 1933, the Benton County Herald explained what the presence of downy mildew meant to the region’s hop growers and how even dusting the crops with various sprays of lime and copper sulfate was not foolproof. “The dusting method,” it informed its readers, “is for the prevention of the disease rather than its cure. There is no known cure.” The article, which drew from the Experiment Station research, summed up best that growers had to be diligent about prevention, and if the spores did reach the plant, that all part of the plants should be pulled down and burned. It was a course of action no hop-grower wanted to face, but one that was required as the years progressed.

Because English cluster hop varieties—the most widely grown in Oregon—were extremely susceptible to downy mildew, growers sought to plant alternative varieties. Some grew Fuggle hops, another English variety that was more disease resistant, though not as high yielding or desirable by brewers. Another option was to plant the hybrid varieties, Brewers Gold and Bullion, produced by E. S. Salmon from Wye College. Emerging again in a leadership and exploratory role, Emil Clemens Horst became one of the first Oregon growers to test the new varieties in 1936 on his ranch near Independence. The experiment proved largely a success. It signaled to growers that new hop varieties would be the major strategies to confront the devastating downy mildew plague in the Willamette Valley. Still, for most growers, neither new cultivation methods and sprays

104 “Dust Hops to Control Mildew,” Benton County Herald, April 1933.

nor new hybrid hop varieties proved enough to prevent an imminent decline in the Oregon hop industry by the next decade.\footnote{106}

Despite these remedies and the potential growth of new hop varieties, downy mildew became increasingly dangerous. In 1934, Frank Needham of Salem reported that “downy mildew is the worst since that pest infested the valley and in some yards, he added, not 10 percent of the hills are coming.”\footnote{107} While he did note that some of his non-Cluster varieties fared better, the indications were not good for the rest of the Willamette Valley. With no cure and limited prevention methods, the Oregon hop industry appeared doomed. In 1943, the state relinquished to Washington its standing as the largest hop producer in the nation and one of the largest in the world. The Golden Era of Oregon hops concluded.\footnote{108}

\textbf{The End of the Golden Era}

In 1940—three and a half decades after the World’s Fair championed Oregon’s “natural bounty” to the world—the title of an article in the May issue of \textit{The Pacific Hop Grower} humbly introduced the end of an era: “E. Clemens Horst Called By Death.” Horst’s life story was familiar to many in the hop industry. He was a German immigrant reared in New York. In the 1890s, he started his own hop company in San Francisco and soon after invented a range of labor saving technologies, most importantly the


\footnote{107} “Mildew Cuts Hop Crop to Half Normal,” \textit{The Oregon Hop Grower}, June 1934, 2.

\footnote{108} Tomlan, 32.
mechanical hop-picker and improvements to hop driers. Furthermore, for four decades, Horst’s company represented smaller growers in domestic and international contracts, typically negotiating with Guinness and other brewers for the body of Oregon growers that did not even know where their hops went. He also became a central liaison between growers and the new agricultural science occurring in the governmental and private sector. In sum, Horst’s story encompassed the Golden Era of Oregon hops and its early struggle in the first part of the century.109

In Emil Horst’s lifetime, except for a brief timeframe following state prohibition and World War I, Oregon was the national leader in hop production, rivaling at the time the largest producers in the world. As the “Hop Capital of the World,” the industry underwent substantial transformations, engaging in a process of modernization and rationalization that proved essential for continued success. While downy mildew brought the industry to its knees by the 1940s, continued efforts in research and dissemination of new agricultural information cemented Oregon’s reputation as a critical player in the global hop industry. The leadership in corporatization, marketing, and science established during Oregon’ reign as the “Hop Capital of the World” allowed regional hop growers to achieve success later in the century.

Not to be lost in the larger stories of Horst and the global connections to Oregon hops, however, were efforts of those less recognized members of the hop-growing community. As the Willamette Valley hop story unfolded during World War II and the

109 “E. Clemens Horst Called By Death,” 3.
following decades, the narrative must not ignore the seasonal laborers who kept Meeker, Horst, Seavey, and the rest in business.
In the last week of August 1934, young Marjorie Plant donned a crown as Oregon’s first Hop Queen. The coronation in Independence on the banks of the Willamette River highlighted the town’s inaugural Hop Fiesta that included air shows, vaudeville, daredevils, and a parade.¹ For outsiders, the staging of this elaborate event in a small town of barely a thousand people may have appeared out of place. Townspeople and the hop growers knew what was at stake. The three-week hop harvest needed pickers and the Hop Fiesta attracted a work force and encouraged it to stay. At the time of Queen Marjorie’s reign, growers required upwards of 30,000 workers in Independence alone to hand pick the crop. Across the state that number reached approximately 70,000 in peak years, or the equivalent of 7.5 percent of Oregon’s population.²

From the beginnings of commercial hop cultivation on the Pacific Coast until mechanization ended manual harvest by the 1950s, growers perpetually struggled to


acquire enough labor. While this was true of most specialty crops harvested throughout the sparsely populated pre-World War II American West, the challenges in the hop industry were particularly difficult. Hop growers needed up to four times more labor than other farmers because of the immense height of hop plants and the abundance of cones throughout. Furthermore, the crop required rapid harvest the moment when levels of lupulin—the yellow resin glands valuable in brewing—peaked. Without enough workers at a specific time for the harvest, the crop’s value declined, or worse, rotted unpicked on the vine.³

Harvest labor injected diversity and social interaction to Willamette Valley hop agriculture. To meet their needs, growers hired men, women, and children of various ages and across racial, ethnic, and class lines. To attract workers over the years, growers offered amenities and entertainment, culminating in the Hop Fiestas of the 1930s and 1940s. The gatherings revealed the rich multiculturalism of the Pacific Coast. Harvest days included a potpourri of languages, songs, and games; harvest nights came alive with storytelling, dancing, and gambling. For three-quarters of a century the hop festival was one of Oregon’s most popular annual folk gatherings, but the occurrences were also marked by racism, discrimination, and labor disputes. The intensive labor situation offers

a history that further connected the Willamette Valley hop industry to other parts of the world and revealed its localized opportunities and challenges for its diverse population.\footnote{My argument is in part one of the many responses to Patricia Limerick’s work in conceiving the history of the American West as fundamentally a cultural diverse place. See: Patricia Nelson Limerick, \textit{The Legacy of Conquest: The Unbroken Past of the American West} (New York: Norton, 1987); William G. Robbins, \textit{Hard Times in Paradise: Coos Bay, Oregon, 1850-1986} (Seattle: University of Washington Press, 1988); Patricia Nelson Limerick, Clyde A. Milner II, and Charles E. Rankin (eds.), \textit{Trails: Toward a New Western History} (Lawrence: University Press of Kansas, 1991); Richard White, “It’s Your Misfortune and None of My Own”: \textit{A History of the American West} (Norman: University of Oklahoma Press, 1991).}

**The English Origins of the American Hop Harvest**

English hop farmers established many of the traditions of commercial hop harvests across the world. Once able to utilize the labor of family and neighbors for picking crops—as did smaller-scale operations in other hop-growing regions of Europe—English growers faced new pressures by the early nineteenth century. Agriculturalists in Kent began to produce annually over 50,000 acres of the crop to meet rising demands for beer. The large operations (opposed to small family farms in Bavaria and Bohemia) required elaborate planning for the attraction of a temporary work force. Without an organized plan for harvest labor, growers faced the prospects of losing their entire investment in the crop for that year.\footnote{The reason for the great expansion in the first half of the nineteenth century related to changes in the brewing industry. Beer consumption expanded with the introduction of lagers in England, and this, in turn, led to the need for more hops. See: Ian Hornsey, \textit{A History of Beer and Brewing} (Cambridge: The Royal Society of Chemistry, 2003), 508-522. Additionally, it is important to note that Kent was not England’s only hop growing area. Sussex, Surrey, Hampshire, Worcestershire, and Herefordshire provided competition added to the hop economy, but with much lower production than Kent. See: Celia Cordle, \textit{Out of the Hay and Into the Hops: Hop Cultivation in Wealdon Kent and Hop Marketing in Southwark, 1744-2000} (Hatfield: University of Hertfordshire Press, 2011), 9-10.}
To solve this dilemma, Kentish hop-growers looked fifty miles westward to the growing city of London. By 1800, the metropolis of approximately one million residents provided a labor source for growers who could not acquire enough workers in the rural areas alone. Growers posted advertisements in stores and newspapers, and recruited by word of mouth. Because the work was unskilled, they welcomed all walks of life. They often preferred women and children for their perceived picking dexterity and, of course, their lower wage demands. But growers hired a great diversity of workers: old and young, men and women, married and unmarried, skilled and unskilled, lower and middle class. Initially, the work attracted both individuals and families seeking additional income. But over time the harvest became more of an occasion, an annual rite for Londoners to escape to the countryside.6

The sojourn was not entirely pleasant. The harvest labor was monotonous, occurring mostly under the hot summer sun. The goal of the hop harvest dating back centuries was simple: pick ripe cones from the vines and place them in a basket, bucket, sack, or box carefully keeping stems and leaves from intermixing. The growers’ cardinal rule was clean picking, for brewers did not want to pay for hop leaves and stems that deterred from the quality of beer. Unlike seasonal harvests in other agricultural sectors, hop picking did not require a tremendous amount of physical stress or endurance. Compared to fruit or berry harvests, for example, there was less time stooped-over or stretching and reaching into trees. Hop pickers mostly stood or squatted near the poles (or trellis wires by the twentieth century) that had been lowered for their reach. There could

6 As early as 1849, Londoners commonly referred to the hop picking take as an “excursion.” Margaret Lawrence, The Encircling Hop: A History of Hops and Brewing (Sittingborne, Kent: SAWD Publications, 1990), 15-24; Cordle, Out of the Hay and Into the Hops, 13, 45.
be uncomfortable heat, exposure to pollen, and the possibility of skin rashes from contact with hop vines. In most cases, however, the greatest difficulty facing pickers was not physical but mental; picking cones for three weeks was tedious.⁷

Provisioning for the seasonal migration to the Kent hop harvest began in London. Workers assembled clothes, tents, cookware, and important food items for the extended stay in the countryside, as well as bonnets, hats and gloves to protect them from the elements while picking. For comfort and entertainment, workers brought portable furniture, musical instruments, and games. With all of these items in tow, the initial trip by foot and wagon in the early nineteenth century offered a remarkable spectacle. Onlookers marveled at the flocks heading to the hop fields with their possessions in tow. The extension of train service from London to Kent by the mid-1800s moved much of this travel and spectacle to the interior of rail passenger cars. Still, be it on the roads or rails, it was hard to miss the yearly exodus from city to country.⁸

Hop farmers prepared for the arrival of thousands of temporary workers by providing basic amenities. They cleared land for camping, established sleeping quarters in dormitories or barns, and set up means to distribute water and collect waste. Growers also collected wood, bedding, and some food supplies for sale to those who arrived at the

---


⁸ Lawrence, The Encircling Hop, 25-34, 47-60. Also see: Celia Cordle, 14-15. It should be noted that the engineers designed the first railways to Kent from London for marketing purposes, not just the transportation of pickers. For overviews of the British railways see: Jack Simmons, The Railways of Britain: An Historical Introduction (London: MacMillan, 1968); John R. Kellett, Railways and Victorian Cities (London: Routledge, 1979); Christian Wolmar, Fire and Steam: A New History of the Railways in Britain (London: Atlantic, 2007).
hopping grounds ill-equipped. Preparation was critical. If pickers did not feel the standards of pay or camp adequate, they often packed their belongings and moved to another farm. Although there were instances when London hop pickers faced detestable living and working conditions, Kentish hop growers recognized the advantages of taking good care of their seasonal employees. By the second half of the nineteenth century, growers secured rail lines for efficient transportation, sanitary housing, access to water, and good pay. Fair and generous treatment ensured a solid reputation among workers and also proved helpful in preventing the occasional strike or riot.

In the mid-nineteenth century, one English grower, Edward Albert White, became legendary among the hop pickers. In addition to paying fair wages, he sponsored organized sporting events and concerts, striving more than any of his neighbors to generate an appealing end-of-summer occasion. The recreational additions to the harvest culture occurred simultaneously with other work rules, including assignments to specific sections of each hop garden and calculations of payment by field bosses. White’s judicious business decisions set precedents for other growers seeking to promote the hop harvest as a convivial “paid vacation.” His workers embraced the social and cultural opportunities and repaid his efforts with hard work and loyalty. Furthermore, his reputation as a generous boss ensured that he never feared for labor supplies even in periods of shortage.9

Other Kentish growers embraced White’s innovations. In the second half of the nineteenth century, the English hop harvest became an increasingly inviting opportunity

for urban residents to take an outing to the English countryside. Even if the work was
tedious, the picking season became an occasion for Londoners to spend time with old
friends or meet new acquaintances. Music, dancing, storytelling, and camaraderie across
social classes concluded hard-working days. By the late nineteenth century, the festivities
themselves became the main attraction of the hop harvest. One London journalist even
suggested that the work appealed to those looking forward to a “month of the Bohemian
life.”

The Kentish hop harvest drew attention from journalists and other writers curious
about the nature of the late summer country holiday. Most affirmed the idea that growers
promoted: positive associations with hop picking, which was fundamentally a
monotonous and unskilled task. But there were exceptions. In the late-nineteenth century,
novelist Charles Dickens traveled among the hop pickers with an eye trained to the
downtrodden of Victorian society. When he observed masses of city dwellers traveling to
the countryside to set up squatter camps in barns or tent villages rather than seeing happy
vacations, he suggested, “I have been amazed…by the number of miserable lean wretches,
hardly able to crawl, who go hop-picking.” For Dickens, the hop harvest appeared
backward and unprogressive when juxtaposed to the skilled labor and craftsmen seen on
the industrializing streets of London.

An 1877 account from a London magazine better described what onlookers and
workers encountered in the hop gardens of Kent. “Judging from appearances,” wrote the

10 “Three Weeks With the Hop-Pickers,” Littell’s Living Age (Fifth Series) 20, no. 1750,
December 29, 1877: 791.

11 Frank T. Maetzials, John Foster, Mamie Dickens, and Adolphus W. Ward, The Life of Charles
author, “one would have set down the whole crowd as belonging to the lowest class—as composed of the scourings of the slums.” Unlike Dickens, who did not spend much time at a hop camp, this journalist’s discussion took a sharp turn after spending three weeks in the field. He continued:

No greater mistake could have been made...I was soon to discover that it is as customary with working families of comparative respectability to go “a hopping” in September as it is for members of another section of society to go to the moors, the seaside, Switzerland, and Norway, and for similar reasons—relaxation and health.12

While the writing may have reflected a bourgeois glossing over of the conditions of poverty and filth, the journalist urged his readers that the hop harvest offered an opportunity for escape to a rustic countryside for a late summer romp. Not only did the harvest provide family entertainment, it also provided health benefits in a period when doctors stressed the importance of time spent outdoors.13

In 1902, another Londoner captured the spirit of the hop harvest, writing, “One of the most delightful holidays I have ever spent was in the Kentish hop-grounds.” He spoke of eating well and enjoying tea and wine. He socialized and took half-day cycling tours. The writer extolled his experiences, noting, “The people in the hop-fields were quite well behaved” and included both local farmers and villagers, as well as a “larger number of

12 “Three Weeks With the Hop-Pickers,”: 790.

Londoners.” In general, the descriptions in this piece and others teetered on lavishness, casting hop growers and hop picking in a favorable light while promoting the hop harvest as a spirited pre-autumnal occasion. Little wonder that American growers embraced the Kentish model of harvest labor just as they embraced English cultivars and associated agricultural knowledge. Promoting the hop harvest as an appealing folk occasion proved practical and effective in attracting a labor supply.15

The Transplanted Landscape and Culture of Labor

In the early 1800s, when a commercial hop culture took root in North America, small growers relied on the hands of family members and neighbors for the seasonal harvest. With expanded acreages by the mid-century, larger operations in New York adopted the Kentish model of hop labor recruitment and the treatment of their hired help. The labor of women and children from urban areas became important. Farms or factories in the industrializing towns mostly commanded the labor of men. Women also played essential roles in tending to camp needs of cooking, sewing, and other domestic duties.16 Growers in the prime agricultural region of Oneida County, New York also hired recent European immigrants and local Native American labor. As could be expected, some

14 “How to Spend a Summer Holiday: Records of Actual Experience: Hop-Picking in Kent,” The Leasure Hour (Summer 1902): 687.


middle and upper class onlookers shared similar attitudes as Charles Dickens, seeing seasonal workers who slept in the “cow-barn, horse barn or hop-house, whichever is most available” as uncouth harvest tramps. Quite simply, some people did not approve of the mixing of lower and middle class families in this unskilled labor pool. Nevertheless, workers appreciated the wages and social atmosphere returning yearly in substantial numbers to the hop fields.

As commercial hop production spread to the Midwest in the mid-to-late-1800s, the idea of a harvest cultural event in late summer enlivened the task and prospects of a laborious three weeks. American growers adopted Kentish traditions by providing good pay, transportation, and amenities for their hired help. They also provided social events for workers, with live music and dancing becoming common after days spent in the field. The most popular harvest event was barnyard dancing and live music around bonfires. For many, the harvest remained just work. But, as the case was in England, workers were drawn to a change of scenery and the sights, sounds, and smell of life in the hop camps.

By the second half of the nineteenth century, the seasonal harvest in hop growing localities of the United States became a romanticized event. Just as they did in England,

---


18 Hop growing arose so quickly in New York that growers and railroad companies cooperated to establish railroads for the “express purpose of bringing the hop pickers.” Tomlan, 121.


20 Some have speculated that the term “hop” meaning “dance” originated in the hop fields. But it is unclear at least according to the *Oxford English Dictionary*. The lindey-hop and other jazz dances had origins in African-American slave culture, and the term hop more likely referred to the physical movement of hopping.
articles, folk stories, and poems published in popular newspapers and magazines captured the harvest spirit. In 1902, the Mennonite Publishing Company circulated one such work, entitled “Hop Picking Time,” that described the varied meanings of the hop harvest for different participants:

“‘Hop-Picking is coming!’ the boys shout in glee,
‘What glorious times we are going to see!
We’ll meet all the girls we have met years before,
And have all those jolly times over once more!’”

‘Hop-picking is coming! The girls smiling say;
‘We’ve been looking ahead for this many a day,
To the beaux we will have, and the dancing and fun,—
We’ll enjoy them so well when hop-picking’s begun.’”

“Hop-picking is coming!” the poor widow sighs,
As she looks on her child with love-light in her eyes,
And thinks of the comforts her earnings will buy
For herself and her child when winter winds sigh.

“Hop picking is coming! We’ll earn what we can,
My wife and myself,” says the stout working-man;—
“‘Tis our harvest time now, but winter will come
When we’ll need all our earnings to gladden our home.”

The poem revealed the cheerful nature of the harvest season, as all classes from servant farm girl to city factory-worker had a chance to engage in harvest activity. It also showed how the harvest season held different social and economic meanings for different groups. All of this transferred to the Far West when hop fields expanded there in the 1870s. The growers and seasonal workers of Oregon, Washington, and California drew from a harvest culture that stretched across time and two continents.

---


The hop harvest on the Pacific Coast took on the attributes of these earlier accounts. Upon her visit to a California hopyard in 1893, a *Cosmopolitan* reporter wrote:

If your nerves have become supersensitive from the corrosions of city life and you are the victim of ennui, or your liver assets itself to the prejudice of your digestion, your duties and your friends, if you have reached the acme of general miserableness, take a vacation among the hop-fields in the gilded early autumn of California. Your days will be made up of dew-exhaled mornings dwindling to the golden point of noon, of afternoons losing the superfluous heat in sunsets flaming the evening summits, and of nights so cordial and sleep-inviting they seem but moments of oblivion.²³

The description was likely a romanticized view from a Pullman car. Yet, it appealed to the intended middle class literary audience of the era, as it explained both the joyful and salubrious nature of the late summer gathering.²⁴ Journalists wrote similarly of Washington and Oregon hop harvests. In 1888, for example, an *Oregonian* writer reported, “The pickers I visited I found to be full of sport. Before I entered the field I could hear roars of laughter coming from it which convinced me that life in them was not so bad as I first supposed.”²⁵

While publishers of these praiseworthy reports intended to address the curiosity of readers, hop farmers delighted. According to historian David Vaught, “Growers knew well that the actual work…was anything but a ‘vacation’….Hop pickers endured excessive dust and pollen, oppressive heat, a contact rash similar to poison oak…and

---


even the threat of electrocution from an unexpected storm ‘taking possession of the wires.’” Still, as he continues, “Growers were not about to disavow ‘the picturesque feature of hop picking time.’”26 While this was surely the case from the grower’s perspective, non-journalistic accounts of workers shed light on the idea that hop picking time was a time for celebration and excitement.

Unpublished diaries and reminiscences from Oregon provide a broader perspective of seasonal life in the hopyards. A young girl, Iris Tarbell, for example, who picked hops in the Willamette Valley for the first time in 1895, was surprised by the opportunity. She wrote to her cousin:

Hop picking was over three weeks ago…I’ll just say that I liked the work much better than I had thought I would even though I started out with some pretty grand ideas about it. I couldn’t make much at first but I kept gaining until I could make a little over $1 per day. I wish I could get work like that year round.27

A Portland man wrote nostalgically about his journey to the Independence hopyards from 1904 to 1906. He recalled a childhood adventure that began on Portland’s streetcar system and concluded with a southward river journey. He wrote, “The trip was beautiful and we saw many wild animals in the fields and woods…We all marveled at the number of small rivers that flowed into the Willamette river.” He continued by noting, “Arriving at the camp site on the farm we were assigned to cabins. These were nice cabins arranged in long rows with plenty of trees for shade. We soon got acquainted with our neighbors

26 Vaught, *Cultivating California*, 90.

27 Iris Tarbell (Yankton, Oregon) to Anna (Tarbell’?), October 13, 1895, Tarbell-Brown Family Papers, Oregon Historical Society, Portland, Oregon.
and I found a nice boy to play with.”28 His words showed how the hop harvest offered an opportunity for growing urban populations to connect or reconnect with rural life, a reality that became increasingly important as the century progressed.

Finally, reflecting upon her work in the Willamette Valley hopyards during the 1930s, longtime resident Amanda Grim summed up the feeling of many when interviewed about her experiences: “[H]ard word to pick hops? No, it was a picnic. It was fun.”29 In all, these sources agreed upon the buoyant spirit of the Willamette Valley hopyards. They also highlight the good pay and amenities offered by growers. Not to be lost in buoyant accounts, however, was the fact that the central objective of the hop picking time was indeed work.

Laboring for the Lupulin

Into the early twentieth century, little about the daily activities of hop labor changed from previous times and places. From the fields of Kent, to New York, to the Midwest, to the Willamette Valley, the work still occurred in the late summer, under the hot sun, and was monotonous. The sole goal of most seasonal workers remained the same: to pick ripe hop cones “cleanly,” without stems or leaves. Sharp differences, however, occurred, both in regional labor organization and in the field and payment method.

28 Hamill recalled that the main purpose for the family hop-picking trip in those years was to buy supplies for his father’s fishing business. Robert M Hamill, “Hop Picking – Hamill Family 1904 and 1906,” Manuscript – Hop Picking – Hamill Family 1904 and 1906, Benton County Historical Society, Philomath, Oregon.

In the Pacific Northwest, larger growers divided their fields into quadrants and assigned workers to specific areas. There, an individual—man, woman, or child—could work at their own pace for as long as they wanted in a day. Before the introduction of the trellis system, growers hired stronger men (called pole men or pull pullers) to remove poles from the ground and lay them down on the ground for pickers. In *Hop Culture in the United States*, Ezra Meeker described the work as follows:

The pole is…lifted clear of the ground and placed either with the top end projecting over the box and the butt end on the ground, or on wooden forks improvised by the pickers for their own convenience. One stout man to every twenty pickers is considered necessary as a helper in taking down poles, cutting the vines apart, making roads and as a general assistant. Later, after the adoption of the wire trellis system, the men unhooked the top wires of the trellis when pickers were ready for a new section of the yard. Former workers often recalled how the days in the yards were full with the call of “wire down,” referring to the readying of a new set of vines for picking. They had good reason. As one historian notes, “To the pickers, the pole pullers and the wire men were the most important figures in the field.” They determined the pace at which one could work and ultimately weighed the hops for pay. The relationship indicated a certain amount of politicking in the hopyards.

---

30 In many instances, pole pullers of certain races or ethnicities worked in segregated yards as their cultural background. Tomlan, 142-143.


32 Tomlan, 143.
Knowing the right people could benefit one’s ability to pick faster and make more money.  

Throughout the Willamette Valley’s “golden era,” from the 1890s to the 1940s, workers on average earned a penny per pound of hops picked, or $1.00 per one hundred pounds. With the average individual picking one hundred to five hundred pounds a day, daily wages stood at $1.00-$5.00. To provide context, during a six-day workweek in the 1920s an efficient hop-picker could earn as much as two weeks or a month’s pay in a factory. Exceedingly savvy workers could make more. One newspaper reported in September of 1912, that Lela Murray, a Yamhill County schoolteacher, set a record in picking 1001 pounds of hops in one day. Given such an extraordinary feat, the paper noted, “She has a written statement from J. G. Morris for whom she picked, that these hops were picked clean and that there were no hops left on the ground or on the vines picked by her on that day.” Furthermore, “These hops were picked entirely alone as the yard boss and Mr. Morris would not allow any one [sic.] to help the young woman that day. In making this record Miss Murray used two baskets and kept up two rows alone.”

But not all hop pickers felt the need to labor so intensely. That individuals or families could work at their own paces contributed to the leisurely nature of the hop harvest. Growers were not always concerned if pickers arrived for socialization more

---


34 Hudson-Cooler, 59.

than harvest work because they paid them by the pound. While Miss Murray’s earnings were extraordinary, the pay in good or bad economic times provided a source of extra cash income for Pacific Northwest individuals and families. It was not enough to live on, but enough to improve some standards of living.

In nearly all Willamette Valley hopyards, payment occurred in the form of tickets representing a number of pounds picked. The tickets were redeemable at the end of each day, week, or harvest season, and could be turned in for cash or used in local stores, restaurants, or taverns per agreements between growers and shop owners. This too was modeled after the English hop harvest, and was designed to keep money within the community. While some workers blew through their earnings in local shops or taverns, most saved as much of their wages as they could for the purchase of items needed in the coming year and to supplement regular income sources. The consumer economy demanded cash for children’s school supplies, winter clothes for families, or extra spending money for the unattached urban workers. Overall, work in the hop fields was an important part of the regional economy. Reports from the first half of the twentieth century estimated that farmers paid hop pickers millions of dollars each year.36

Learning from their Kentish counterparts and farmers in other specialty crops, most Oregon hop-growers recognized the advantage of a stable, productive labor force. They offered incentives to their workers to stay for the season of work, from the hiring

---
period to payment. Before the turn of the twentieth century, growers such as the Krebs Brothers and the E. Clemens Horst Company in Independence recognized the importance of urban workers, too. Early on they coordinated with rail operators and Willamette River steamers for efficient transport to their fields. Although railroads could create others issues (mostly related to the costs of return trips home), they served hop pickers even after the 1920s when many arrived by automobile with furniture and camping equipment in tow.

In addition to transportation, successful Willamette Valley hop growers provided housing and services for picking crews. Smaller operations allowed families and single women to sleep in the house and offered single men accommodations in the barn or hop house. Most set aside areas to pitch tents and supplied running water, toilets, and fuel for cooking for a small fee. Some larger operations included cafeterias, and nearly all hopyards—particularly as acreage increased—included a commissary on the property, usually run by the female head-of-household or the owner’s children. These small operations provided basic foodstuffs: flour, bacon, and butter, as well as treats, such as soda. It was also common for butchers or merchants from nearby towns to bring goods for sale into camps where women usually cooked in the evening. In both campground and

37 Sidney Newton, oral history interview by Kathleen Hudson Cooler, Benton County Historical Society, Philomath, Oregon, March 24, 1982.

38 By no means was providing transportation unique to the Willamette Valley or Pacific Coast hop industry, as growers in Kent and New York had some the same thing. Nor were the practices unique to the hop industry. As one scholar noted in the mid-twentieth century about the turn-of-the-century Midwest, “Wherever there were berries, fruit, or vegetables to be gathered, women and children were employed. By 1900 flat cars and steamboats carried thousands of women and children from Chicago and Detroit to the berry fields.” See: LaWanda F. Cox, “The American Agricultural Wage Earner, 1865-1900: The Emergence of Modern Labor Problem,” Agricultural History 22/2 (April 1948): 107.
fields, most growers offered water, lemonade, or soda to help with dehydration and boost worker morale. As the large hop growers became established and economically secure, they built temporary dormitories and recreational facilities, and paid for live music and entertainment. Although recreational opportunities were initially limited to what the pickers provided for themselves, growers organized events by the twentieth century. They wanted to make their workers as comfortable as possible and continue to generate festive associations with harvest culture.³⁹

The plans were not always successful. Despite the best efforts of West Coast hop growers to recruit and provide for their workers, they never overcame the prevalent fact of agricultural life in the American West: the region’s population was a fraction of England and New York, and competition for available workers was a yearly challenge. To ensure proper harvest, hop growers had to hire all available hands.⁴⁰

**The Diversity of the West, Captured in the Hopyards**

Early on in his tenure as a hop grower, Ezra Meeker recognized that securing enough harvest labor was a critical problem not only for his farm but also for his neighboring western Washington farmers. In the 1870s, the railroad boom that encouraged the arrival of larger Pacific Northwest populations was still a decade off. The Bureau of the Census reported a modest Tacoma population of 78 residents; Seattle barely topped 1,000. While Meeker and his fellow hop growers hoped to attract as many...
workers as possible by adopting labor recruitment methods found in England and New York hop regions, there simply was not a significant enough population to harvest crops. The reality forced Meeker and his peers to buck a common perception of the time regarding the inferiority of non-white workers. In their place, hop growers fervently reached out to American Indian groups surrounding the Puget Sound.  

Meeker’s decision paid immediate dividends. Tribal groups from Washington, British Columbia, and even Alaska seized the yearly opportunity to earn good wages in a brief time during the hop harvests. By the time he penned what was to become a hop manifesto in 1883, Meeker noted:

The bulk of the hops are picked by Indians; they come from far and near, some in wagons, some on horseback, a few on foot, but the greater number in canoes. Two thousand, five hundred Indians came into the Puyallup valley during the hop-harvest of 1882. They were of all conditions, the old and young, the blind and maimed, the workers and idlers.  

Despite their diversity in age, gender, and health, Meeker acknowledged his good fortune that the indigenous laborers were not only available in large numbers, but also quality hop pickers. Tribes with backgrounds in gathering food and medicinal plants in the wild adapted to the work easily. Growers were most impressed with their ability to pick cleanly. Meeker suggested that they were “reliable” workers who labored until “pitch dark.”

The decision to hire Indians spread across the Pacific Northwest and into the

---

41 Vaught, 68.


43 Ibid.
Willamette Valley by the mid-1870s. There, many growers agreed that American Indians were “the best of hop-pickers.”

While happy to have American Indian workers, growers still treated them as second-class labor. The tribal groups worked on segregated hop fields and spent their evenings and nights in segregated camps. They also earned about one-tenth less the pay than white workers, or approximately ninety cents per one hundred pounds of hops picked. Additionally, not all members of white society were pleased with the use of indigenous labor. Many hop growers complained about the slow and intentional pace of Indian workers, with some flat out refusing to hire them. Others derided the hop harvest along with seasonal wage labor as counterproductive to upward social mobility for American Indians. But the decision not to hire could be risky. To ensure a timely harvest, hop growers needed any available worker.

The journey and annual arrival of indigenous peoples to the hop fields became an event of note that shaped the character of the region’s agricultural landscape. Particularly on the Puget Sound where families arrived by canoe from British Columbia, Alaska, and other parts of Washington to pick hops, newspapers enthusiastically reported the arrival of native peoples to the beginning of a festive harvest season. In 1885, the *Oregonian* reported on the Indian arrival to Port Townsend, the first stop to the Puget Sound hop fields:

---

44 “Eugene Items,” *Oregonian*, September 18, 1876.

Nine canoes filled with Indians…arrived here yesterday from New Westminster. Twenty-one more canoes are expected to-day. These Indians are bound for the hop fields, and from present appearances there will be no lack of hop pickers this season. There are between 200 and 300 Indians of all ages.46

Every harvest season newspapers and magazines reported on these arrivals for both community interest and to prepare urban shop owners in Seattle and around the Puget Sound for an influx of business from the American Indian communities.47 One Overland Monthly writer described the experience as the “event of the year,” explaining that, “These Indians, with their boats and rush tents, their baskets and babies, their cards and gambling, and all the hoo-doo and tamanamus, or midnight dances, make the autumn in the Sound country a time of panoramic interest.”48 Horse racing and sweat baths also marked the Indian encampments that assumed the status of a seasonal cultural landscape. In sum, American Indian festivities contributed to the harvest culture, bringing various experiences, languages, foods, and events.

In the last decades of the nineteenth century, American Indians and whites recognized the entrepreneurial possibilities surrounding what was becoming the celebrated hop harvest. At the same time, white Americans wanted to view native peoples in authentic clothes and in rustic settings. Various sources, including Buffalo Bill’s Wild West Shows and Helen Hunt Jackson’s A Century of Dishonor (1881) drew attention to

---

46 “News of the Northwest,” Oregonian, July 21, 1885, 2.

47 “Puyallup Valley Notes,” Oregonian, September 25, 1882. Also see the discussion in Coll Thrush, Native Seattle: Histories from the Crossing-Over Place (Seattle: University of Washington Press, 2007), 109-111.

48 “Indian Hop-Pickers,” 162.
the plight and culture of American Indians.\textsuperscript{49} The Pacific Northwest hop harvests provided an ideal window into indigenous life. According to historian Paige Raibmon, Indian women in particular sought to exploit the popular practice of Indian watching. They sold traditional basketware and took photographs with white tourists for money. Some likely engaged in prostitution. Equally important in the spectacle, were the white businesspeople who jumped at the opportunity to exploit the harvest culture. They built hotels for tourists interested in viewing the hop harvest and encountering genuine Indians, and provided wagon and rail transportation the hop fields for visitors. Although many tourists arrived from within the region, others arrived from more distant points. Famed naturalist John Muir even commented that the Puget Sound hop harvest was one of the best tourist destinations he had visited.\textsuperscript{50}

Willamette Valley residents also took interest in the arrival of American Indian communities to the hopyards. For hop growers, the arrival ensured a proper harvest and for others Indian families traveling to the hop fields provided a spectacle. In \textit{The Settlers Handbook to Oregon} (1904), Wallis Nash captured the scenes of the yearly native trek to the Willamette Valley hopyards:

\begin{quote}
The Indians on the reservations enjoy it heartily. There is a regular exodus from the Grand Ronde Reservation in Polk County and the Siletz in Lincoln County. The road out from the latter passed through our ranch and the procession of the
\end{quote}


\textsuperscript{50} Raibmon, 88-93, 126, 141, 217. For more of this topic, see: Philip J. Deloria, \textit{Playing Indian} (New Haven: Yale University Press, 1998).
wagons, with their dusky occupants, men, women and children all bound for the hop yards, was a long one, every year.⁵¹

Recognizing the significance was not simply a one-sided affair, however. American Indians embraced their fortune at the opportunity to work and derive cash from the economy. One Siletz tribal member, Gale Evans, recalled that in the first half of the twentieth century, “[A]s long as you could walk, they made you pick. No monkeying around.”⁵² Thus, while enjoyable, the “hop picking time” was an important part of the indigenous economy achieved as a family and community effort.

The multiple meanings of American Indian participation in the Pacific Northwest hop yards was complicated. The most obvious was the economic benefit. Following an array of Indian wars and a federal policy of designations of reservations and confinement, native peoples and local economies sought integration of native labor into the wage system.⁵³ As one writer noted in 1891:

---


⁵² Gale Evans, oral history interview by Daniel C. Robertson, April 7, 1982, Benton Country Historical Society, Philomath, Oregon.

⁵³ Bauer, “Working for Identity,” 242-245; Eric V. Meeks, “The Tohono O’odham, Wage Labor, and the resistant Adaptation, 1900-1930, *The Western Historical Quarterly* 34, no. 4 (Winter 2003): 468-489; Robert B. Campbell, “Newlands, Old Lands: Native American Labor, Agrarian Ideology, and the Progressive-Era State in the Making of the Newlands Reclamation Project, 1902-1926, *Pacific Historical Review* 71, no. 2 (May 2002): 203-238. A panel at the 2010 annual meeting of the Western Historical Association indicates that many scholars are in the midst of broadening historical understanding of Indian wage labor in the American West. Arguably, because of the associated tourist industry discussed at length by Paige Raibmon and Cole Thrush, the hop fields provided the most visible example of the indigenous transition in the cash economy via wage labor, but the panel provides other important insight that has been both published and unpublished at the time of this writing. The presenters and their papers included: Michael Magliari, “Indian Slavery and in California’s Sacramento Valley, 1850-1867”; William J. Bauer, Jr., “California Indian Work and the Making of Anthropology”; Robert Walls, “Coastal Salish Loggers and the Intercultural Landscape of Woods Work.”
Before the introduction of hops into Washington...Indians did not earn a dollar in money in a year, but now, at the close of the hop-harvest, a single Indian family, composed of man, wife, and usually several children will carry home with them one hundred dollars in cash. The difference to that poor family, in comfort and civilization, can easily be understood.54

As American Indians became increasingly reliant on wage labor, hop picking occurred amidst a cycle that included fishing, clamming, cannery work, farming, picking berries, and logging. Of all these sectors of work, the hop fields paid the most. In fact, for some tribes who continued traditional economic activities, money earned from hop picking was enough cash to subsist for the year. A less obvious benefit of the harvest for tribal groups was the opportunities for cultural events. Yearly gatherings of Pacific Northwest tribes had been common for centuries. The hop fields allowed for continuity and shared celebrations surrounding games and trading. In many ways the Pacific Northwest hop fields provided a middle or transitional ground between traditional indigenous culture and the dawning of a commercial and industrialized world.55

Despite the welcomed presence of Indians by most hop growers, racial tensions and exclusions often appeared. To avoid the hiring of any non-whites, some hop growers

54 George Ehret, Twenty-Five Years of Brewing With an Illustrated History of American Beer (New York: George Ehret, 1891), 111. Ehret was one of New York’s most prominent brewers.

insisted that school be delayed to allow children to pick instead of Indians. At other times whites enacted anti-vagrancy laws to force white workers into the hop fields. Additionally, in periods of national depression, out-of-work white men contested the use of non-white labor, thinking that it was inferior and they could do better work. In a world that required hops to be picked in a timely fashion, however, growers did not always comply.\textsuperscript{56}

The worst criticisms of American Indian labor arose simply from a common white superiority complex that saw non-whites as inferior and backward. A writer for \textit{The Overland Monthly} sarcastically noted that for the Siwash Indians of the Puget Sound, “The Hop ranch is the El Dorado…[H]e is enabled to fill his pipe with tobacco, his stomach with rum, and to clothe his body with an odd conglomeration of the habiliments of civilization.”\textsuperscript{57} Another article from 1888 noted, “The poor Indian oft lends his untutored mind to the task of hop picking, and relieves the monopoly of the occupation by trading off his ponies and squandering as fast as earned, the proceeds of his industry.”\textsuperscript{58} Despite the attempts to denigrate American Indians in racist terms, the sheer need for workers forced Pacific Northwest hop growers to use Indian labor.

Rapid expansion of Pacific Coast hop growing pushed labor demands beyond white and Native American help. In 1883, the year of the infamous global hop shortage that drew attention to the Pacific Coast, \textit{West Shore}, a Portland-based promotional

\textsuperscript{56} “The Scheme to Introduce Child Labor in the Hop Fields,” Oregonian, September 14, 1888


\textsuperscript{58} “Hops and Humanity,” \textit{Oregonian}, September 16, 1888, 4.
magazine, reported that even with white and Indian workers in the fields much of the crop would be lost. The constant pressure forced growers to follow California’s lead in hiring Asian immigrants. Beginning with the employment of Chinese workers, successive waves of individuals from Japan and the Philippines arrived to the hop fields during the late nineteenth and early twentieth centuries. In the Central Valley, California social critic Carey McWilliams noted the need for agricultural labor in the Pacific Coast was “made to order” for immigrants. His remark not only pointed to the need for Asian workers, but also that a majority of these workers had extensive backgrounds in Pacific Rim agriculture. According to David Vaught:

Horticulturalists held the Chinese in high regard for more than their availability, stamina, and organization. These immigrants brought with them vast agricultural knowledge accumulated by their ancestors over centuries of experience, which they readily adapted to California’s environmental conditions.

Another historian notes, Chinese workers in particular, “earned a reputation for organization, stamina, and stoicism coupled with an unmatched willingness to toil under disagreeable conditions.” Specialty crop growers of all types saw Chinese workers as “docile,” “reliable,” and “industrious.”

59 The West Shore 9, no. 6 (June 1883): 139.


61 Carey McWilliams, Factories in the Field: The Story of Migratory Farm Labor in California (Boston: Little, Brown, and Company, 1939), 68.

62 Vaught, 71.

63 Street, Beasts of the Field, 242.

64 Chan, 201-202, 332-333. Also see: McWilliams, 59; Wyman, 91-96. In 1880, Oregon was the home to 9,510 Chinese. In 1910 that number dropped to 6,468 and again in 1920 to 2,151. There were also smaller numbers of Japanese in Oregon. In 1880 the census recorded only two residents.
Although less prominent in the Willamette Valley, Chinese laborers did not escape notice. Many growers praised them for their speed and efficiency during harvest. Some were so impressed with their work that they kept them on the farm year-round. Still, because of a perceived racial inferiority, growers paid Chinese workers up to twenty-five percent less than whites, even lower than indigenous workers. At one point the *Oregonian* reported simply that, “growers do not feel justified in offering more.”

Additionally, as was the case in their treatment of American Indians, growers assigned Chinese workers to segregated living quarters and field assignments. Nevertheless, the Chinese laborers brought their own distinct culture—language, foods, and games added to the multicultural atmosphere of the Pacific Coast hop harvest.

Amidst a time of anti-Chinese sentiment, many onlookers criticized the presence of Chinese workers in the Pacific Coast hopyards. Yet, as early as 1880, the *Oregonian* defended their use because of the fundamental need for labor. The newspaper quoted a grower from Butteville as saying:

> A great many papers on this coast are condemning the employment of Chinese in the hop fields. The writers of these articles will probably view the matter in a different light when they informed that after all the help available—whites, Chinese and Indians—has been mustered into the hop fields of Oregon and

By 1900 that number jumped to 2,522, and in 1920 it jumped again to 12,971. Many of the Japanese agriculturalists had moved to the Hood River area in the Columbia Gorge, but Asian immigrants also worked in canneries, logging, and railroad building. See: Linda Tamura (foreword by Roger Daniels), *The Hood River Issei: An Oral History of Japanese Settlers in Oregon’s Hood River Valley* (Urbana: University of Illinois Press, 1993).


66 Wyman, 91.
Washington, still a considerable part of the crop must spoil this season for want of pickers. 67

The paper then reported, “Throughout the Willamette valley the work of harvesting the hop crop is beginning. About 500 Chinamen have already gone to different hop fields, and 150 more leave Ash street dock this morning for the vicinity of Independence.” 68 Not all of the region’s residents were pleased.

Even if, for a period, hop growers exclusively sought Chinese workers to labor in their fields, their employment across the rural West brought about problems, underlined by a deep racism. Some criticisms were related to work. One West Shore article explained:

> Hop picking in the 1892 hop yards of Oregon, one-third of which are located in Linn County, has been in progress for several weeks. Scarcity of pickers has led many growers to employ Chinese, but it seems to be the universal opinion that their work is not as satisfactory as that of the whites and Indians. They do not accomplish as much and are not as thorough. 69

The Chico Enterprise commented that, while better than Indians, Chinese workers ranked below Japanese and whites, particularly young white women. 70 Other criticisms were not so tame. In the same 1888 article that chastised the use of American Indian labor, the Oregonian noted, “The meek, quiet and sometimes despised Chinaman, is largely

---


68 Ibid.

69 “Notes of the Northwest,” The West Shore, 10, no. 10 (October 1884): 336.

70 “Girls Best Hop Pickers,” Chico Enterprise, August 9, 191.
employed as a last resort in default of white labor. His dark ways and vain tricks have not
served to render him a desirable article in the hop fields.”

In general, many whites protested Asian labor of all types, believing that they
were both in competition with whites and un-American because they refused to integrate
into what they believed was the traditional American economy and society. The most
glaring criticism of Chinese was that they sent wages to their family homes across the
Pacific. Some American workers saw this as an affront. It appeared that the Chinese
workers were not trying to engage in the common society and economy. Particularly in
California, but also in Oregon and Washington, growers took heed and often replaced
Chinese labor with American Indians or simply advertised for non-Chinese workers.

Other actions were violent. Chinese workers faced discrimination, and sometimes
hostilities. One of the worst of these instances occurred in September of 1885, when an
angry white mob descended upon a Chinese hop-picker’s camp in the Kittitas Valley of
western Washington, killing three men. Similar violent incidents occurred in Tacoma and
other cities throughout the late nineteenth century West.

71 “Hops and Humanity,” 4.

72 For a larger discussion, see: Chan, This Bittersweet Soil; Erika Lee, At America's Gates:
Chinese Immigration During the Exclusion Era, 1882-1943 (Chapel Hill: University of North
Carolina Press, 2003). Congress did not repeal the Chinese Exclusion Act until 1943 when the
U.S. supported Chinese nationals in the midst of their Civil War against communists.

73 “Chinese Hop-Pickers, Oregonian, September 6, 1893, 8; “All Quiet in Butteville,” Oregonian,
September 8, 1893, 8; “Hop-pickers are Disappointed: Preference Given Oriental Laborers,
Oregonian, September 9, 1904, 4; Hudson-Cooler, 49-50; Ruth Kirk and Carmela Alexander,
Exploring Washington’s Past: A Road Guide to History (Revised Edition) (Seattle: University of
Washington Press, 1995), 346; Tomlan, 138; Raibmon, 79; Carlos Schwantes, “Protest in a
Promised Land: Unemployment, Disinheritance, and the Origin of Labor Militancy in the Pacific
But the anti-Chinese protests only exacerbated the labor shortage for the hop harvest. By the 1890s and early 1900s, Japanese and Filipino immigrants helped fill the demand. Their arrival arose in part because of Japan’s modernizing effort during the Meiji Restoration, a period when the Japanese government encouraged young men to move abroad to learn new skills and earn money. Filipinos began arriving shortly after the United States acquired the Philippines following Spanish American War resettlement with Spain. Like many Chinese immigrants, both Japanese and Filipinos often had agricultural backgrounds and were good workers. At first, farmers across the West welcomed their arrival, but as was the case with Chinese a backlash occurred. On American soil, whites saw the sophistication of Japanese working crews and the rise of Japanese families as a more immediate threat.74 Historian Michael Tomlan notes, “As late as 1907, many Sacramento County growers posted notices discouraging both Chinese and Japanese from applying because they intended to supplement white pickers with native Americans.”75 White hop farmers’ feelings were clear: they preferred white labor over all others.76

The story of labor in the hopyards provides an important indicator about diversity found in the West. While picking hops itself was vital for the regional economy and brewers around the world, the presence of men, women, and children from different races, classes, and ethnicities created a cosmopolitan feeling in the hopyards. Although camps were mostly segregated, many former hop pickers recall constant interaction between

74 Vaught, 119-128.
75 Tomlan, 128.
76 Vaught, 90.
different social and cultural groups. Variations of language and foods, and dances and games contributed a vital character to the Willamette Valley hop harvest and others across the Pacific Coast.  

In 1903, a writer for *Out West* magazine, a popular journal of life and culture in the American West, captured the diversity of labor in the hopyards perfectly, noting, “Hardly elsewhere can be found so many nationalities, classes and types, busied at a common occupation. There are the office man and woman, the clerk, the professional man, the student, the teacher and the invalid, eager for the physical benefits…or bent on enjoying a vacation.” The article mentioned more specifically, that the social makeup included white families and “bands of Japanese…Chinese; some negroes, the ever-present Italian, the ‘Hobo,’ and lastly, the Paiutes. Just as the specialty crop connected to goods and knowledge around the world, so too did its labor supply.

**A Progressive Era Sociological Perspective**

At the same time that Oregon arose as the nation’s largest hop producer with thousands of seasonal workers toiling in the hot sun, Progressive Era reformers sought to address a wide variety of social, economic, and political concerns. Lincoln Steffens’ *Shame of the Cities* (1904) and Upton Sinclair’s *The Jungle* (1906) cast popular concern...

---


79 Willi, “Hop-Picking in the Pleasanton Valley,” 158.
on the plight of the American working-class. Journalists and scholars looked to all areas of the American economy and society noting problems associated with industrializing capitalism. The Willamette Valley hopyards were not exempt from scrutiny.

In 1907, University of Chicago-trained sociologist Annie Marion MacLean identified Oregon’s hopyards as an important place for exploring conditions of women’s labor.\(^{80}\) The industry had grown from small family farms to a global leader in hop production in the previous two decades, and it had done so on the backs of a large supply of seasonal labor, a significant portion being women. Like MacLean’s previous investigations—including “two weeks at a department store” and “the sweat shop summer”—her objective was to experience the day-to-day life of an “understudied industry” to help paint a picture of national labor. Also, as was the case for these previous studies, she “found very little could be learned on the outside concerning the conditions of work.” MacLean “decided to hire out as a picker and go with the crowd to learn something of the life first hand.”\(^{81}\) Even if she had an agenda, her writings on this experience, published in *The American Journal of Sociology*, provide one of the best sociocultural snapshots of Willamette Valley hop harvests during the early twentieth century.

---

\(^{80}\) The Chicago connection here is important as sociologists trained in this tradition focused on empirical observations, ground-up studies. See: Martin Bulmer, *The Chicago School of Sociology: Institutionalization, Diversity, and the Rise of Sociological Research* (Chicago: University of Chicago Press, 1984), 1-8.

After arriving in Portland in early September of 1907, MacLean’s undercover fieldwork began with a perusal of recruitment advertisements from Willamette Valley hop-growers. She recorded the details of pay, lodging, and transportation. Sponsored in part as a representative for the National Board of the Young Women’s Christian Associations, she looked past one announcement reading: “We pay $1.10 per 100 pounds. . . . Perfect accommodations, good food at city prices, free whiskey, dances five nights in the week, evangelists on Sunday and a hell of a time.” 82 But she soon found a prospective employer who, like other large operations, provided direct transportation from the city. Prepared for an adventure, MacLean joined nearly a thousand others aboard the “Hop Special” train bound for Independence from Portland. 83

On the “Hop Special” MacLean recognized that her story would not just be about workingwomen, but the diverse body of a western workforce on their journey. MacLean observed “men and women and children, scores and scores of them belonging in family groups, and, in addition, several hundred young men and women off for a lark with a chance to make some money.” In the four hours that the train headed southward through the valley, she also noted, “Many of the families were from the country, one woman having come a distance of two hundred miles with seven children ranging in age of from two to fifteen years. The other class, the unattached men and women, were mainly the city’s floating working population.” Given these differences, MacLean reported that the various social groups had different agendas. The rural families looked for supplemental

82 MacLean, “With Oregon Hop Pickers,” 84.

83 Many well-known larger growers provided similar transportation options, both by railroad and by river steamer. Some unscrupulous growers, however, would not provide efficient transportation home if they provided it at all.
income in an industry that allowed their children to participate. The urban “clerks and factory workers and servant girls” sought respite from the city and a chance to build new social ties (perhaps even romantic ones as MacLean observed the quickness in which many of the young workers settled in the railcars “pillowing their heads against each other”). At the very least, she noted, “It was a picturesque gathering, with an air of expectancy about it. There was to be at least a change of occupation.”

After arriving in Independence, a six-mile wagon ride awaited the women and children who deboarded the “Hop Special,” while the men had to walk. All were tired after this last leg as they arrived to claim tents and rudimentary accommodations of denim and straw for bedding. The promise of a dance reinvigorated the camp’s collective spirit after the long day of travel, but the failure of the band’s instruments to arrive caused disappointment. Nevertheless, MacLean and her companions socialized that Saturday night and the following Sunday before the long days of picking began. With these new acquaintances, including her helpful female tent-mates, MacLean settled in for the late summer labor and prepared herself for the observations associated with it. She learned the process of yard assignments (185, Yard B, Company 4 in her case), careful picking of hops free of stems and leaves for full payment, and the overall intricacies of eating and sleeping in the socially diverse camp. MacLean reported that the camp had its own culture, even a distinct jargon. Calls of “wire down” rang through the hopyard when pickers moved to a new area. A shout of “box full” indicated to the yard’s foreman the need for new picking containers. In all, MacLean enjoyed the experience. It differed

84 MacLean, “With Oregon Hop Pickers”: 85-86.
markedly from some of her previous investigative sociological studies. Just how differently she would soon share with her readers. Although she did not stay throughout the three-week picking season, she hastened to put her observations into print.

Among MacLean’s most important remarks on the “Oregon tradition” of hop picking was its status as a “healthful occupation.” The comment confirms the positive image about the experience of working in Pacific Coast hopyards portrayed in some sources and accounts, as well as remembrances by former hop pickers.85 The seasonal work was almost celebratory, with ample sunlight and light physical labor that also brought social and financial benefits. While MacLean complained of the “air thick with pollen” that left her “choked…by dinner” and the constant “reaching and stooping and tramping,” she recognized the variety of benefits for others. Whether dealing with issues of economy, society, health, or place, she concluded that Oregon hop-picking was a democratizing and liberating occasion for men, women, and children of all classes. In the end, MacLean’s only significant recommendation was in the offering of more “wholesome entertainment” for the campers; and her final remarks exclaimed, “Long live the Oregon hop picker!”86 So she did not see exploitation but rather a nice supplement to their major activities of workers—opportunity for summer camp. There was no muckraking element in her report or observations.

In sum, MacLean’s depiction of the Willamette Valley’s seasonal hop harvest affirms much that has been remembered and written about Oregon’s “golden era” of hop


production and its roots to English harvests. From the 1870s to the 1940s, a wide range of the region’s residents eagerly seized the opportunity to augment their regular source of income and a festive spirit guided the harvest season of late August and early September. The absence of race as a category for MacLean’s inquiry stands out, as other writers emphasized the multicultural makeup of the Pacific Coast hop harvest. Her omission might have reflected her emphasis on women workers and class, or an experience that lacked cultural diversity. For there were vast sociocultural changes in agricultural labor occurring at the time of her writing. Hopyards across Oregon, Washington, and California progressively employed more white labor.

**Wheatland and World War: The Whitening of the Hopyard Laborforce**

Soon after Annie MacLean visited the Willamette Valley, western agricultural labor began a period of racial and ethnic transformation. On the national level, Euroamerican citizens became increasingly wary of the millions of European and Asian immigrants who had arrived in the previous decades, competing for jobs and resources and rejecting American cultural norms. Then, in 1914, World War I unleashed sweeping anti-immigrant campaigns. Nativist, or jingoistic, sentiments deepened by 1917 when the U.S. entered the war, as dominant white America feared anti-war foreign nationals, socialists, and other perceived anti-American groups. The revival of the Ku Klux Klan in 1915 and spread of assimilation programs for immigrants preceded Congress’s decision to pass a strict anti-immigration law in 1924. During this time, according to one historian, Americanization programs swept across the country, seeking to eliminate cultural differences in the name of nationalism and capitalism in the hope of assuaging the
concerns of immigration. The idea stretched from Ford assembly lines to hop fields of the Pacific Coast. But it manifested in a different way, exclusion rather than inclusion. Hop growers in Oregon turned to the growing populations of urban whites to meet their labor needs. They sought to appeal to the work force not only through amenities and entertainment, but also through standards of health and comfort promoted more broadly during the Progressive Era. The result, as David Vaught has suggested: “Hop picking, in fact, increasingly became a white, even middle-class undertaking.”

A riot in the hop fields of Wheatland, California played a more localized role in the sociocultural transformations of western agricultural labor. On August 3, 1913, the seasonal harvest had begun at the Durst Brother’s hop ranch, one of California’s largest at the time. But all was not well. A crowd of 2,500 workers became agitated with working and camping conditions that included diseased water sources, lack of toilets, and extensive waste surrounding the living areas. Seizing the opportunity to organize for better standards in agricultural labor, a representative of the Industrial Workers of the World (I.W.W.) arrived to protest. In one hundred degree heat, he incited the crowds with

---


88 Even in the earliest years of commercial hop cultivation in the Pacific Northwest, growers had sought white laborers. Despite praise for American Indian or Asian workers, there is a subtle understanding that growers preferred white families. Calls for workers in newspapers increasingly called for white urban families to join the harvest. In 1888, under the subheading, “Good Occupation for Families” the Oregonian noted, “If I were disengaged,” said a citizen last evening to a member of THE OREGONIAN reportorial staff, ‘I would take my family and go out into the hop field. A pleasanter way of passing two or three weeks I do not know of. A small family can earn without trouble $100 in that length of time. Many well-to-do people do this, and a stranger going into a hop field, would be apt to be greatly deceived in his estimate of the wealth or poverty of the assembled workers.” “All Among the Hops,” Oregonian, September 20, 1888, 6.

89 Vaught, 90.
pro-labor speeches and ultimately established a list of demands for the ranch owners. Needless to say, the ranch owners were not pleased and called upon local law enforcement. Upon their arrival, a riot broke out in which two workers, one officer, and the ranch’s lawyer were left dead while many others were wounded. The following day California governor Hiram Johnson ordered 200 national guardsmen to the ranch, though the damage was done.\footnote{Digimanio, “The Women of Wheatland”: 236-255; The Wheatland Historical Society, \textit{Wheatland}, 91. Also see discussion in Vaught, 134-145.}

Although murder trials and investigations into the role of the I.W.W. immediately grabbed the public’s attention, the ramifications for capital and labor relations in western agriculture had a more lasting impact. The most obvious result was the 1914 Congressional investigation that sought to understand seasonal workers and working conditions by questioning industry leaders such as the Durst Brothers and their neighbor, Emil Clemens Horst. California created a Board of Labor to survey and enforce fair labor practices that had been lacking in Wheatland and many other hopyards. In 1924, Oregon created a similar institution, the Oregon Seasonal Employment Commission, both to professionally recruit workers and regulate worksites.\footnote{Hudson Cooler, 50-51.} The process had broader implications, as growers feared how hiring immigrant and non-white labor would draw unwanted attention to the conditions of their hop harvest.

To avoid trouble, Willamette Valley hop growers responded to the Wheatland riot by seeking more white workers. Demographics favored the shift since the closing decades of the nineteenth century. More people, generally, lived in the Pacific Northwest
including peoples of Northern European decent. The region’s growing cities provided a larger pool of labor. By 1910, Portland’s population had grown to over 200,000 and surrounding towns of Oregon City and Salem had also grown. At that time, just as Kentish hop growers had done in the previous century, Oregon growers raised their efforts to recruit from the cities. In the process, they also sought to better the harvest experience. Responding to Wheatland and general Progressive Era concerns, growers wanted to make camp more family friendly and festive.

James Seavey’s fields offer an apt portrait of changes to the seasonal hop labor camps in the Willamette Valley. In 1915, a Corvallis newspaper described one of his hop ranches outside of the town, noting “Each year just before picking begins, water from the various wells in the camp grounds are tested and has always been found pure and free from typhoid or any other disease germs. Garbage barrels are placed at convenient points throughout the camp, and these are emptied daily.” Then, it continued:

[C]ertain rules are enforced and every care taken to keep the camp clean and sanitary. A certain camp discipline is maintained. In the field the management is particular, requiring hops to be free from leaves or stems, and while particular yet because of the consideration and fair treatment which Mr. Butler has always given his [employees], he finds no trouble securing all necessary help when picking time comes. His pickers return, many of them now in the Seavey yard for the third and fourth year.

---


94 “A Benton County Hopyard.”
The writing showed how growers enforced discipline in the work place. It also revealed Progressive Era concerns about health and the problems associated with the Wheatland conditions that instigated the riot.

Growers like Seavey worked hard to advertise their quality working and living conditions, hoping to turn the harvest into a wholesome family affair. A 1918 advertisement read:

Picking will commence Sept. 4 at J. W. SEAVEY’S, one mile south of Corvallis. Good camp grounds, plenty of good water, sawed wood, one table for each camp, baskets furnished to pickers FREE. Grocery store and a meat market on the place. Will meet trains and move pickers out and in after picking is over, free. Auto truck morning and evening to accommodate those not able to camp on ground. 180 acres on high trellis and clean yards. Please register early. 95

Seavey’s yards were some of the most popular, and would employ over 500 workers alone in Corvallis, and hundreds more in Eugene and Forest Grove. His camp’s reputation was useful in recruiting workers in the competition with hundreds of other growers in the Willamette Valley. 96

But still, as was the common theme prior to mechanization, even the most attentive growers failed to meet their seasonal labor needs. Particularly amidst Prohibition, many of Oregon’s Protestant families were averse to contributing their labor to vice. With increasing acreage each year in the 1920s, growers had to up their ante. Among others, Emil Clemens Horst worked with a social organizer from Portland to determine an effective approach to meeting family needs. One historian suggests that the outcome was a “three-pronged approach, including”:

95 “NOTICE: Hop Pickers Wanted,” Gazette Times, Corvallis, Oregon April 19, 1918.

first, housekeeping, tent pitching, sanitation, water, and fuel supply; second, primarily providing first aid and preventative medicine but also issuing a camp newspaper and supervising concessions; and third, a recreation program that included the installation of playgrounds and nurseries and assumed the responsibility for nightly camp fire meetings, dances, religious services, and special programs on Sunday afternoons.

He continued:

Not only were sandboxes, swings, and slides built under huge pine trees, but a playground worker and a nurse supervised over one hundred children in daily activities. Other large ranches throughout the region adopted many of these activities in one form or another.97

Along with these attractions, growers emphasized the benefits of fresh air and exercise, and the retreat from industrial life. Additionally, the ordering of public spaces appealed to the white middle class. The approach proved beneficial, as the character of the hop harvest took on these dimensions by the 1920s.

Seavey and Horst were not the only two growers affected by the turn against diversity in the hopyards. In the 1920s, hop growers large and small recognized their opportunity to expand and profit from Europe’s hop situation. The growers of Independence, Oregon came together with new ideas. In 1922, the growers and shop owners of Independence pooled their resources to provide an entertainment program. Michael Tomlan suggests that the objective served growers in need of labor and kept money earned from the harvest in town. Later in the decade these efforts reached greater levels with carnivals and parades, as well as at least one individual hop farm employing “a recreation director, two assistants, two nurses, and two matrons.”98 Recreation magazine reported in 1923, various hop growers installed “simple playgrounds with day

97 Tomlan, 154-155.
98 Tomlan, 151.
nurseries attached” and conjoined efforts with the Independence post office and medical services. The changes worked. Although the number of laborers was never secure, growers used the period to attract white families while also passing various inspections from state and federal labor agencies.99

Throughout the 1920s, the Willamette Valley hopyards took on new meanings for its workers once again. By no means was nonwhite labor excluded, but the increased presence of urban white families harkened back to London and Kent in the early 1800s. The hop picking time became an occasion to cut ties with the city. Conversely, the hop harvest connected the city once again to the rural countryside. In an era before the proliferation of sport camps, children had opportunities for new friendships and entertainment. Adults, both in families and single, had similar opportunities. For all, the hopyards presented not just an economic opportunity, but also a chance to spend time immersed in rural life surrounding by health, vitality, and community. But just as growers had developed a system to hire and maintain white, urban, middle class workers, economic and political changes forced them to rethink their labor recruitment agenda once again.

**Hoboes and Hop Growers: Labor Concerns During the Great Depression**

The Great Depression brought further sociocultural changes to the Willamette Valley hopyards. Underlying the change was the major expansion of the industry following repeal of Prohibition in 1933. Even with a rising threat of downy mildew,

---

Oregon hop acreage reached its highest levels by 1936 and offered thousands of seasonal labor positions each year. Unbelievably, however, even in the midst of the sour economic climate, hop growers still could not meet their labor needs. In 1935, one industry representative noted, “So acute is the shortage…that several yards were unable to start picking today. Practically all of the yards are short handed.”¹⁰⁰ The shortages forced growers to abandon a preference for white family pickers. In their place, growers turned to migrant workers, a group identified unceremoniously at the time as hoboes, bindlestiffs, fruit tramps, and rubber tramps. Although white families (as well as a significant amount of non-whites) continued to contribute to the harvest, government reports indicated that across the West migrants constituted fifty percent of hop harvest labor. The demographic shift cast a new light on the identity of the hop harvest as a convivial paid vacation that growers had cultivated in the previous century.¹⁰¹

Progressive and later New Deal reformers complicated the lives of hop growers during harvest. Governmental labor and immigration boards that materialized after the Wheatland incident to check on camps and working conditions expanded into the 1920s and the 1930s.¹⁰² But they struggled to keep up with the expanding number of camps that emerged after repeal. Many resembled Hoovervilles established by out-of-luck farmers


¹⁰¹ See, in particular, two works focused on the social makeup of the hopyards: Carl F. Reuss, Paul H. Landis, and Richard Wakefield, Migratory Farm Labor and the Hop Industry on the Pacific Coast with Special Application to Problems of the Yakima Valley, Washington, Rural Sociology Series in Farm Labor, no. 3 (Pullman: State College of Washington Agricultural Experiment Station, 1938.); Otis W. Freeman, “Hop Industry of the Pacific Coast States,” Economic Geography 12/2 (Apr. 1936): 157-158.

¹⁰² Tomlan, 154-155.
and urbanites. The government sought more solutions to agricultural labor. Sanitation was a key concern, but so too was the comforts and quality of life for individuals and families across the West. For the most part, Pacific Northwest farms were up to code, as growers got into the habit of providing clean camps and water as part of their overall approach to recruiting labor and keeping them happy. New Deal reformers also targeted child labor abuses. Oregon hop growers worried as government programs, including those instigated by the National Recovery Act, investigated this large source of their harvest labor. They exhaled in 1933, when *The Oregon Hop Grower* reported to its readers that “employment of children will not be effected [sic.] under the program as farm labor is specifically exempted from its provisions.” The growers interpreted the report as suggesting that, “The NRA ‘child labor’ provision was meant to keep children out of the ‘sweat shops’ and ‘factories.’ The average child will be benefitted by rather than injured by working in the open, fresh air, of the hop yards.”

The overwhelming concern for the hopyards, however, was an associated concern among all of western agricultural labor, in the problem of migratory workforce. These workers traveled from the Central Valley of California north and south through Oregon and Washington, following the agricultural harvest of seasonal crops. While the migrant workers themselves worried about living paycheck to paycheck in a depressed economy, studies of the migratory work problem voiced concerns about migrants and society. Namely, they were concerned with the inability of migrant workers to become useful

---

members of the American society. The Chicago professor and colleague of Annie MacLean, Marion Hathway captured the sentiments in a 1934 study. She feared that single workers were “deprived of the opportunities for personal development afforded by membership in a stable family group and by participation in community life” and that married workers were “making a less satisfactory adjustment.” She noted, “He is not only deprived of participation in family and community life, but he is denied the constructive experience of sharing responsibility for other members of his immediate group.” 104 Hathway summed up her study by suggesting migrant laborer was simply a blight on the progression of modern American society. In other mediums, Woody Guthrie’s folk songs and the photographs of Dorothea Lange etched the plight of migrant workers into American consciousness. Still, as had been the ongoing theme in the West Coast hop industry, growers had little choice but to hire all available workers. 105

In the worst aspects, the hodgepodge of seasonal hop labor in the Willamette Valley materialized in strikes and riots. Labor historian Stuart Jamieson suggests that compared to California and Washington, the disputes in Oregon were mild. But physical altercations with guns drawn did occur. Jamieson relates the following:


105 Anne Whiston Spirn, Daring to Look: Dorothea Lange’s Photographs and Reports From the Field (Chicago: The University of Chicago Press, 2008), 143-189. (In 1939, the famed New Deal photographer Dorothea Lange surveyed migrant agricultural life in the Pacific Northwest. As an employee of the Farm Security Administration (originally the Resettlement Administration), her work was aimed to document working conditions. In the Willamette Valley she found dirty fieldworkers, but not horrible conditions as others had. Conditions on the hopyards she photographed appeared to be sanity, and while the faces of children are dirty and disheveled there were not signs of mistreatment or overworking. This was a good sign for growers, workers, and the government, given some of the decades previous events and problems.)
The only large strikes in Oregon’s agriculture occurred during 1933 and 1934 in the hop industry of Polk, Benton, and Marion Counties. Seasonal laborers employed in this crop undoubtedly were influenced by the current wave of farm strikes led by the Cannery and Agricultural Workers Industrial Union of California earlier in the season. The union may even have sent organizers from California to follow itinerant agricultural laborers in their seasonal migration north to the Oregon hop fields.106

Still, Jamieson goes on to note that, “No union of hop pickers developed among the strikers, however, as their period of employment in the crop was too brief. The strikes were characteristically sudden and brief.”107 This was perhaps a detriment to pickers and growers alike as tensions erupted in the following two years as well when growers reduced pay and insisted upon cleaner picking. Rather than violence, thousands of pickers walked off of the McLaughlin and Horst Ranches near Independence. After recognizing that the crop would remain unpicked if not for their help, the growers agreed to increase pay. Overall, as Jamieson suggested, “Strikes in the hop-growing areas of the Willamette Valley were illustrative of labor relations in a crop in which neither workers nor employers were strongly organized.”108 Nevertheless, they left an imprint on the hearts and minds of growers, workers, and the government.109


In a series of folksy watercolors from 1933, the Pacific Northwest painter Ronald Debs Ginther (named in part after the labor leader and 1912 Socialist Party presidential candidate Eugene V. Debs) captured the tension of the Independence strikes. The title of the pieces themselves framed a differing opinion of the “paid vacation”: “Hop Pickers Threatened by Drunken Foreman and His Pals at Beginning of Strike;” “Tense Moment (Guns Drawn) in Hop Yard Strike;” “Independence, Oregon. State Police Intervene in Hopyard Strike.” The series was amongst the most intense of Ginther’s painting of the lives of migrants and homeless eking out their livings in the Great Depression. Ginther’s other paintings also portrayed the harvest as an affair of society’s lowest classes—those that one scholar suggests, were “shut out of the American Dream.”

On the heels of Hathway’s studies and labor disputes, the federal government directed funds to address migratory labor problems of the Pacific Coast hop industry. The main issue was the social impact of migratory laborers. Writing for *Economic Geography* in 1936 Otis W. Freeman noted, “The transients belong to the group called ‘fruit tramps,’ familiar to Westerners. A decrepit car or truck carries a family and their camping equipment from one temporary job to another…The nondescript appearance of…a camp resembles that of a group of refugees.” He noted additionally the concerns for migrant children: “The children early learn to dodge the truant officer and grow up with a minimum of education and home life.” In sum, he suggested, “Such transient labor

---

proves of use to fruit and hop growers, but constitutes a social problem of real concern.”

Later in the decade, another scholar, Paul Landis, followed up on the concerns of labor in the Pacific Coast hop industry. Considering the thousands of workers needed across the West Coast he noted, “Obviously no community can expect to have a sufficient number of resident workers to meet a demand of this character. Twenty to thirty thousand workers must be drawn from great distances to help in the work of the hops.” He then suggested, “Even though they live in the democratic West, hop pickers are beginning to acquire the stigma of a lower class…Few people other than professional migratory workers…are willing to participate regularly in such work.” The words offered a much different perspective than hop growers wanted to cultivate in the preceding decades. In fact, they harkened back more to Charles Dickens who described hop pickers as “miserable…wretches.” Although Landis explained that growers tried to maintain comfortable and safe camps, he suggested that the sheer number of laborers needed in a camp created substandard living conditions. In particular, he noted, “Flies and mosquitoes are almost certain to become a pest and filth tends to accumulate. Dysentery and typhoid are a constant threat to the workers and to the community as well.” The biggest problem, however, was: “The hop industry is a social liability to the community in which it is located in that it attracts a large number of people who no community wants.”

---

111 Freeman, “Hop Industry of the Pacific Coast States”: 157-158.

112 Landis: 89.

113 Landis: 89-92.
Coast needed attention. Workers needed new skills, permanency, and better integration into American society.

Together, Freeman’s and Landis’s writings, Ginther’s folk paintings, and Dorothea Lange’s photographs offered differed perspectives of Pacific Coast hop labor. New Dealers contested the image of a “paid vacation” that growers had cultivated in Europe and North America in the previous century. They cast the hop harvest as unsanitary, sometimes violent, and populated by the downtrodden of society. Yet, in doing so, they overlooked half of the labor equation: middle class and urban families who continued to seek the hop harvest for its convivial atmosphere and social opportunities. The Hop Fiesta of Independence and its association with this group of people provides one more layer to the intricate history.

**The Hop Fiesta**

Amidst the challenges of the Great Depression, the hop growers of Independence, along with local merchants and the Independence Chamber of Commerce, expanded their efforts of the 1910s and 1920s to organize and promote the hop harvest as a healthy and happy place. Attention to sanitation, childcare, and medical issues, met both government demands and those of an increasingly white, urban, and middle class labor force. Facing the largest harvests ever after the repeal of Prohibition in 1933, the hop industry of Independence took the gamble of investing in festivities. They created the Hop Fiesta that would appeal across the social spectrum in addition to providing safe and comfortable accommodations. One of the festival programs noted, “The yearly hop-harvest celebration is held for the dual purpose of focusing attention on the hop industry of the
state, and to provide a gay four-days of merrymaking for the thousands of pickers and visitors who crowd this community at this season of the year.”¹¹⁴ The event held multiple meanings: growers continued to depend on selling the harvest as a festive affair; shop owners wanted workers to spent money earned from hop picking in town; laborers wanted to earn money and enjoy themselves in the process.¹¹⁵

The appeal of the Hop Fiesta was genuine. It continued from 1934 to the mid-1950s, offering one of the Pacific Northwest’s most important folk occasions.¹¹⁶ Besides the crowning of a yearly hop queen (and hop king beginning in 1941), Independence growers and businesses built a 3,000 seat Hop Bowl for various entertainments, ranging from music to boxing matches. The program in 1935 included children’s dances, a “Bathing Beauty Contest,” “Policing,” “Decorations,” “Sports,” “Airplanes,” and “First Aid.”¹¹⁷ But the excitements surrounding the event could be far more intense. Other events throughout the years included themed ceremonies such as the 1940 “‘Over the Rainbow’ Coronation Ceremonial.” For the more adventurous, the program from 1939 advertised an “[e]xhibition of log rolling and speed-boat racing on Willamette river at Independence ferry landing.” It also advertised a “[t]hrilling and daring exhibition of


¹¹⁵ Tomlan, 124.

¹¹⁶ Interestingly, in his assessment of festivals and rituals, Earl Pomeroy did not make note of the cultural importance of the hop harvest or the Hop Fiesta in his foundational work, The Pacific Slope. Pomeroy, The Pacific Slope, 347-349.

motorcycle riding given by the Portland Police Motorcycle Corps, a crack group of riders, headlined by Bob (Suicide) Dillion who crashes a flaming wall.” In all, the vast array of entertainments brought alive the vibrant spirit that growers had sought to cultivate for over one hundred years. And they did so in a way that no other sector of agriculture labor did.

The Hop Fiesta gamble paid off for Independence growers and those represented in the Chamber of Commerce. Although securing enough labor was still a yearly concern because of the lack of a local labor pool, the festivities brought thousands to the area when growers needed them. The event also brought positive recognition to Independence and the larger Willamette Valley hop culture in a period of economic and social difficulties in the 1930s that included government regulation and monitoring. The important fact behind the festivities was the thousands of acres of hops to be harvested that contributed five million dollars to the state’s economy. The spectacle of the festival promoted the best possible harvest.

As the Hop Fiesta program concluded after the 1941 season:


119 It is important to note that the culture surrounding other seasonal harvests could be fun and a time for social interaction, music, and games. The overwhelming difference in the hopyards was the effort of growers to provide entertainment for their workers, whereas other agricultural workers had to fend for themselves. For an excellent comparison, see: Jose M. Alamillo, Making Lemonade Out of Lemons: Mexican American Labor and Leisure in a California Town, 1880-1960 (Urbana: University of Illinois Press, 2006).

We commemorate this harvest as unusual. We have built the Hop Bowl as a place where each year revelry and entertainment can be had by hop workers. The Bowl has been well used. Its events have called attention to the hop harvest, and publicized this community. We believe the steadfast interest shown by our people in this enterprise is a tribute to Americanism, and community spirit, and the advertisements you find on these pages are concrete evidence of the support we receive from business houses.\cite{121}

It was quite an accomplishment. While fleeting because of the onset of World War II, the event captured a century of efforts by growers across the Northern Hemisphere to paint the hop harvest as the event of the year.

**The End of “Hop Picking Time”**

Upon the onset of World War II, Willamette Valley hop growers faced a severe labor shortage. Decades of recruitment efforts in trying to acquire and maintain labor sources did little good when millions of young men headed off to war and women filled gaps in the industrial workforce. Growers sought other solutions in the form of mechanical harvesters. Although expensive, growers found that machines stripped hop vines clean of cones and leaves in a series of belts and sorters. Mechanical efficiency and clean picking impressed growers, and, in the postwar period all Willamette Valley farms adopted the technology. The “hop picking time” quickly faded into a folk memory.

Nevertheless, for three quarters of a century, even amidst changing social dynamics that reflected larger trends in American and global history, the annual hop harvest marked one of the Willamette Valley’s most vibrant annual folk occasions. The hop fields also revealed the cultural diversity of the Pacific Coast in the second half of the

\cite{121}“Program for Independence Hop Fiesta, August 1941.”
nineteenth and first half of the twentieth centuries. The culmination turned the late summer harvest into a fascinating conglomeration of languages, foods, songs, and entertainments. Migrant labor, substandard working and living conditions, and sometime rioting or violence also framed the hop harvest. Yet, in the process, growers attracted workers, and these individuals and families contributed to their own well-being and to the contents of beer glasses around the world.
Chapter Four

After the Hop Rush:

Big Beer, Small Farms, and the Rise of the American Hybrid

1943 – 2000

_Hoptopia_ faced a crisis in the mid-twentieth century. After an extended period of modernization and rationalization that not only helped the Willamette Valley become the “Hop Capital of the World” but also offered an important sociocultural meeting place during the harvest season, the spread of downy mildew during the 1930s and 1940s threatened to destroy the industry. Farmers expanded acreage in anticipation of a renewed domestic beer market with the repeal of Prohibition in 1933, but the quality of the crops deteriorated. In 1936, at the height of the industry in Oregon, growers cultivated over 26,000 acres of hops. That number dropped to 6,000 acres by 1950 and 3,000 acres ten years later as growers turned to other cash crops, while a thriving community of over one thousand individual hop growers dwindled to fewer than 400. There loomed uncertainty for the growers of Oregon’s most important specialty crop.¹

But all was not lost. Despite widespread uncertainty, the professional and scientific foundations established in previous generations allowed Oregon to remain a crucial part of the global hop industry. A determined group of multigenerational specialty crop farmers worked with corporate breweries to streamline agricultural practices. Crop scientists at the Oregon Experiment Station achieved success in hop research and breeding. The results carried the Willamette Valley to a new hop renaissance into the concurrent revolution in craft beer from the 1970s to the early 2000s.

A Mid-Twentieth Century English Assessment

Five years after World War II ended, British agricultural experts and economists addressed a longstanding inability to compete with American hop imports. The topic concerned the British hop industry by the end of the nineteenth century, and intensified in the twentieth century as Oregon gained a global market share and earned a reputation among brewers for a quality product. In the late 1940s, the British government recognized that prices for American hops undercut even the average cost of producing the English crop. For English growers who had been a center of the hop world in the two centuries prior, the news was disheartening.² To seek answers, the British government used Marshall Plan funds to send delegates on a North American investigative tour. Throughout July and August of 1950, the members of a “Hop Industry Productivity Team”—including two representatives from Guinness, two members of Great Britain’s

² The concept of productivity, or the more efficient use of natural resources through engineering and science, became a central component of containment policy for the postwar American government. In Great Britain and Western Europe, the Marshall Plan entailed collaboration with agricultural practices centered on technology and efficiency. See: David Ekbladh, The Great American Mission: Modernization and the Construction of an American World Order (Princeton: Princeton University Press, 2010).
Hops Marketing Board, and an agricultural economist from Wye College—traveled the Pacific Coast states and British Columbia studying the competition for the struggling English industry. They came to an uneasy conclusion: the temperate climates, well-draining soils, and level terrains along the Pacific Coast were simply more conducive for hop cultivation than England. Although Bavaria and Bohemia remained integral players in the European hop economy, the British tour highlighted the new American prominence.³

The British team’s visit came at a time when the Pacific Coast hop industry faced immense changes. Productivity of Oregon hop crops suffered beginning in 1930 with the introduction of the downy mildew disease from Europe and an inability to combat it effectively. It was not the only issue looming. Competition with Washington’s Yakima Valley contributed equally to the demise of growers and acreage of Willamette Valley hop farms at mid-century. Beginning in the 1890s (upon Ezra Meeker’s recommendations) growers planted rootstock in good volcanic soil and benefitted from a railroad infrastructure that connected distant markets. The construction of irrigation projects in the 1910s allowed Yakima farmers to thrive and expand in the following decades. While lacking the natural rainfall of the Puyallup or Willamette Valleys, the more arid climate proved beneficial by the 1930s. The drier environment offered a natural

defense against the downy mildew destroying Oregon crops, and virgin soils helped stave off other pests, including hop aphids that attacked Puyallup Valley hops.\textsuperscript{4}

In the Yakima Valley, acreage quintupled from 1929 to 1948 from just under 3,000 to over 13,000 acres. More importantly, Yakima Valley hop yields averaged well above 1,500 pounds per acre, while Oregon growers struggled to average above 900 pounds. Along with these changes, Yakima farmers favored planting seedless hops—more valued by brewers—well before their counterparts along the West Coast considered the option. For all of these reasons, residents of the Yakima Valley claimed the title as “Hop Capital of the World” as it continued to expand from the 1950s onward.\textsuperscript{5}

Nevertheless, Oregon hop growers remained invested in their industry. In 1950, the visiting British team still assessed the Willamette Valley as productive and viable. Save for a dwindling California contingent and those acreages scattered in southern Oregon and Idaho, the Willamette and Yakima valleys were the only American centers of commercial hop production left. Oregon growers faced particular challenges and changes to the industry, related both to their agricultural practices and their relationships with


\textsuperscript{5} United States Department of Agriculture, Bureau of Agricultural Economics, “Outlook for Hops From the Pacific Coast,” (Washington, D.C.: United States Department of Agriculture, Bureau of Agricultural Economics, 1948), 2-5; United States Department of Agriculture, Statistical Reporting Service, “Hops, By States, 1915-69: Acreage, Yield, Production, Disposition, Value, Stocks (Washington, D.C.: United States Department of Agriculture, Statistcal Reporting Service, 1971), 2-8. More specifically, two social scientists reported in 1950, “The importance of the changes is seen in the fact that during the five-year period from 1940 to 1945, the acreage of hops in Washington increased 205 per cent while the acreage in Oregon decreased by 4 per cent.” They continued, “The acreage of hops in Oregon is 62 per cent more than that of Washington but the production is 26 per cent less, due to the lower per yield acres.” See: Miller and Highsmith, Jr., “The Hop Industry of the Pacific Coast”: 63-71.
brewers. Just as their forbearers adapted to new technologies and markets, growers in the mid-twentieth century faced adaptations to the changing circumstances of agriculture and the world around them. The first step included new relationships with beer-makers.6

6 While it is difficult to find the exact number of Willamette Valley hop growers in certain years, the June 1944 issue The Hopper listed all Oregon members of the United States Hop Growers’ Association.

The Rise of Big Beer

On April 7, 1933, when Congress allowed for the sale of 3.2 percent beer under the Cullen-Harrison amendment to the Volstead Act, beer-drinkers and members of the brewing industry rejoiced. Anheuser-Busch ceremoniously trucked beer to the White House door. By December when Congress passed the Twenty-First Amendment, a cheerful public opened countless bottles of beer, wine, and spirits across the nation. They all celebrated the legal return of these beverages and the jobs and revenue created in the associated industries. Undermining this enthusiasm, however, was a harsh reality. Prohibition fundamentally transformed the workings of the American brewing industry and severed the American public’s relationship to hand crafted ales and lagers of previous generations.7

Pacific Coast hop growers were not entirely clear about what the new world of beer meant for their livelihoods. They had worked diligently since the late nineteenth century to gain market shares across the Americas, Europe, and around the Pacific Rim. The Hopper, their main journal, kept its finger on the pulse of the hop industry across the world much in the same way that Ezra Meeker and his peers did in previous eras. Growers recognized that repeal created a renewed American marketplace for their products, particularly as the United States solidified itself as one of the largest beer

---


producers and consumers in the second half of the century. But the revived industry had to overcome its own hurdles that caused uncertainty among the nation’s hop producers.\(^8\)

The rebuilding and restructuring of the American beer industry in the 1930s and the 1940s set the pace for American beer consumption for the rest of the twentieth century. Breweries that survived Prohibition had done so with sophisticated corporate strategies and deep enough pockets to repurpose and reprogram their facilities. During Prohibition major national breweries such as Pabst, Anheuser-Busch, and others, as well as larger regional brewers, Portland’s Henry Weinhard’s and Tacoma’s Rainier Brewing, stayed in business by manufacturing soda, baking yeast, ice cream, cheese, chocolates, and near beer and selling these products within preexisting distribution networks. The ad hoc business kept these companies viable throughout the 1920s. But not all breweries could adapt. Of over 1,000 domestic breweries in operation prior to national Prohibition, fewer than 200 remained in 1933.\(^9\)

Despite a drastically reduced competitive field, rebranding and rebuilding the American beer industry was not an easy task. A fervent prohibition movement persisted across the country. Participants kept a watchful eye on breweries, particularly the initial mandate that limited legal beer production to 3.2 percent alcohol. The limitation

\(^8\) United States Department of Agriculture, Bureau of Agricultural Economics, “Outlook for Hops From the Pacific Coast,” (Washington, D.C.: United States Department of Agriculture, Bureau of Agricultural Economics, 1948), 15. By the 1930s, the Pacific Coast hop growers had replaced the German connection to these areas. Demonstrating the intensity of which they looked after world markets, the following articles appeared in 1946-1947 alone. “Mexican Hops and Beer,” The Hopper, May 1946, 8; “Brazilian Hops,” The Hopper, June 1946, 8; “Poland Rebuilding He Hop Industries,” The Hopper, September 1946, 4; “English Hop Prospects,” The Hopper, September 1946, 5-6; “Czech Hop Crop Increasing,” The Hopper, October 1946, 6; “Good Hop Crop in Canada,” The Hopper, October 1946, 8; “Hop Situation in Yugoslavia,” The Hopper, November 1946, 10; “Hop Situation in Belgium,” The Hopper, February 1947, 10.

\(^9\) Ogle, Ambitious Brew, 190-205.
challenged the brewers’ ability to sell their products.\textsuperscript{10} As one historian suggests, “In a delicate position after their 1933 rebirth, the brewing industry had to gauge the best way to appeal to the broadest market while not alienating key segments. Any misstep and they might provide prohibitionists with ammunition.”\textsuperscript{11} The inability to manufacture stronger and more flavorful beer placed a major burden upon how to advertise. The answer to the problem rested with transforming the culture of consumption from the social sphere of 1920’s dance halls and beer gardens to consumption in the domestic sphere.\textsuperscript{12}

Brewers took steps to meet their marketing needs. First, they successfully lobbied for new laws that allowed grocery stores to sell beer. Next, they utilized the new technology of aluminum cans that would make purchases more efficient, eliminating any obligation to return glass bottles. In 1935, grocers in Virginia first stocked cans of Kruger’s Cream Ale, and Miller, Pabst, Schlitz, and Anheuser-Busch followed in the next decade with similar packaging in other states around the country.\textsuperscript{13} Finally, beer companies slowly changed advertisement strategies. While they continued to draw inspiration that captured elements of the “roaring twenties,” advertisements moved from the social sphere of dance halls to the household. The proliferation of radio and television


\textsuperscript{12} Corzine, “Right at Home”: 846-847

\textsuperscript{13} Ogle, 190-217. The author notes that in 1935 Americans consumed approximately one-third of their beer in cans and bottles. By 1940, this number increased to approximately fifty percent, and ten years later the number reached eighty percent.
aided these efforts tremendously, as did a focus on female consumers and their role in purchasing goods for the household.  

The brewers’ efforts to maintain, as one scholar notes, “their good public image and restore their industry” proved successful within the first decade after repeal.

Domestic beer consumption increased by the outbreak of World War II. And, as a sign of the nation’s renewed relationship to the beverage during wartime, the Food Distribution Administration ordered American brewers to donate fifteen percent of their products to the American military. The military believed that low-alcohol beers did not pose a threat to its efficiency, and, in fact, championed beer as a morale booster. The downside of the decision to force brewers to donate their product was a further strain on smaller breweries to make profits and stay in business. The mandate accelerated the nation’s movement away from smaller brewery operations and toward dominance by big beer.

Brewing industry changes aside, The Hopper reported in 1944: “Hop growers are glad to know that their product is adding its bit to the supremely important task of winning the war.”

Aside from a brief decline in beer sales in the late 1940s, big beer was well positioned for continued success in the 1950s, a decade of consumerism and economic expansion. Upgraded industrial facilities and refurbished advertisement campaigns that

14 Corzine, 843-847.
15 Mittleman, Brewing Battles, 99.
16 Ogle, 219.
17 The Hopper, April 1944, 3; Mittleman, 128.
18 Ogle, 225.
contributed to brand recognition made for larger market shares. The larger brewers sought horizontal integration. The Pabst, Anheuser-Busch, and Miller companies energetically sought to buy-out smaller brewers and the distribution networks that belonged to them. Historian Maureen Ogle underscores the importance of this development by noting how mergers became the most important part of the expanding brewing industry, and that the “space on a distributor’s truck” was coveted by all. She notes, “When Blitz-Weinhard of Oregon, for example, bought Great Falls Brewing of Montana, Blitz bought not just a brewery, but access to its distributors and so to another market.”

Amidst all of these developments following war and Prohibition, there loomed a problem for beer purists and Pacific Coast hop growers. American beer had changed. No longer robust conglomerations of colors and flavors, beers in the postwar era were predominantly light colored and easy drinking lagers. American brewers added rice and corn to their malts instead of the traditional barley and wheat to achieve economy and

---


conform to the initial blandness of post-Prohibition beer. With less malt in beer arose the need for fewer hops for bittering. By World War II brewers utilized seventy-five percent less hops than they had earlier in the century.\textsuperscript{22} In 1950, two social scientists investigating the American hop industry provided global context, noting, “In the United States, each thirty-one gallon barrel of beer requires the addition of about a half pound of hops. In foreign countries the amount used may be up to one and a quarter pounds per barrel.”\textsuperscript{23} The falling hopping ratio concerned American hop growers.

Pacific Coast hop growers, as expressed in their organizations and industry journals, considered the changes and new orientations of domestic brewing a threat to their livelihood. They had fared adequately during World War II in large part because of the federal government’s support of the beer industry, despite the fifteen percent production tax. But in the late 1940s, growers’ worries turned to the sustainability of their livelihoods given the immensely decreased hopping rates. In 1948, the United States Hop Growers Association called upon the USDA’s Bureau of Agricultural Economics for an in-depth study. A report, entitled “Outlook for Hops From the Pacific Coast,” noted the following:

Beer consumption in the United States increased by more than 100 percent between 1935 and 1948, but the consumption of hops in the manufacture of beer increased about 33 percent. This disproportionate increase of the manufacture of beer in relation to hops used in its manufacture was due to a change in the hops-beer ratio from 0.702 pound of hops per barrel of beer to .455 pound in 1947-48.\textsuperscript{24}

\textsuperscript{22} Mittleman, 158; Hudson-Cooler, “Hop Agriculture in Oregon: The First Century,” 76.


As if this information did not cause hop growers enough anxiety, the report further noted a belief that most brewers were “inclined to believe that the consumer preference for the so-called light beers will continue in the postwar era.” The research raised fears particularly for Willamette Valley farmers who grew only hops on their land, and relied increasingly on the domestic brewing industry for sale of their product.

Ironically, it was the decreased hopping rate that saved the Pacific Coast hop industry. The new directions in American big beer reflected a larger mid-twentieth century consumer trend toward conformity, accommodation, and the “silent generation.”

Food culture also became homogenous, marked by a general blanding of the American palette. Miller High Life (sold in the modern form in 1957) and subsequently released light beers complemented an era of TV dinners, McDonalds hamburgers, and Campbell Soup. Like these other manufactured goods of mass production, the American lager became the staple of backyard barbeques and football parties, appealing across socioeconomic categories of gender, race, and class during the 1950s and 1960s. The popularity of macro brews expanded from the 1950s onward, leading to a steady demand for American hops. In sum, the sheer quantity of bland beer produced kept up demand for Willamette Valley hop farmers. Furthermore, for economic and nationalistic reasons, brewers joined others in the food industry to seek American


27 Ogle, 228-231. The idea of the “blanding” of the American palette is Ogle’s.
agricultural products opposed to importations from other countries. The trend reinforced major breweries’ commitment to forging relationships with Pacific Coast hop farmers and funding hop research programs.28

In the 1940s the Master Brewers Association of America, United States Brewers Association, American Brewing Industry, and American Society of Brewing Chemists established a Hop Research Institute in Chicago. The program underscored the new influence of American corporate brewers who, at the time, continued to look to Europe for fifty percent of their hops, but wanted American products. The institute brought big beer, small farmers, and scientists together to discuss needs on the farm for better hop drying techniques, storability, baling methods, and, perhaps most importantly, asserting market demands for seedless hops and increased lupulin content.29 The event revealed a new leadership by corporate brewing to invest in hop research where the federal government once took the initiative. It also revealed a continuous vital connection with Willamette Valley hop growers. G. R. Hoerner, a crop scientist at Oregon Agricultural


29 D.D. Hill and D.E. Bullis, “Summary of Hop Grade Investigations and Hop Quality as the Brewer sees It” (Brewers’ Hop Research Institute, Circular No. 5) (Chicago: Brewers’ Hop Research Institute, 1942), 11-16. The specifics were as follows: Representatives of the institute judged samples for color, aroma, amount of lupulin, color and condition of lupulin, and general appearance. The writers noted, “Quality of hops is much more difficult to define and describe than is quality in most agricultural commodities.” And they called many of the qualities “intangible.” But they did determine that the American industry still needed to take measures for improvement. After analyzing 120 responses from brewers on hop quality, they insinuated that changed were needed across the Pacific Coast hop industry, particularly the Willamette Valley. Most notably, brewers no longer wanted seeded hops because of their belief that it was extra weight and deterred from the flavor of beer. Five out of six brewers also wanted greater lupulin content overall in their hops, fewer broken cones in their bales, and, in general, a better rules for grading hop quality. Another key point was that because of inconsistencies in domestic hops and a perception that European hops were still superior, over fifty percent of growers continued to look to Europe before the Pacific Coast.
College, offered the institute’s opening comments while serving as the institute’s Secretary in Charge of Research. After reminding the attendees that his home region still grew nearly half of the hops in the United States, he explained how he and other leaders of the institute envisioned collaboration among the various groups attending. The consensus between Hoerner and his peers in the postwar period was similar to earlier generations: the American hop industry needed to invest more in future research programs. While disappointing to many of the attendees, the efforts signaled the new directions of collaboration as well as Oregon’s continued role in planning for the future of the American hop industry.³⁰

Amidst expanded funding for research programs, big beer also made its presence increasingly felt in the Pacific Coast hop industry by cultivating individualized relationships with farmers. Hop growers commonly entered into direct multiple-year contracts with brewers, and brewing company representatives became frequent visitors to Willamette Valley hop farms during the growing season and during harvest. The arrangements offered financial stability, a chronic difficulty for specialty crop farmers. At the same time, the watchful eye of representatives from brewing companies ensured that they were getting a quality product. Often this meant prodding growers to modernize their agricultural operations. By the 1970s, big beer sponsored hop farmers’ visits to agricultural and beer conferences across the globe. Many hop growers from the post-World War II period explained that the new connections helped Willamette Valley farmers explore the world and integrate into a worldwide agricultural and beer culture.

³⁰G. R. Hoerner, “Brewers Hop Research Institute: Circular No. 1” (Chicago: Brewers’ Hop Research Institute, 1940), 1-7.
Big beer’s efforts in this sphere added a cosmopolitan element to the community of Willamette Valley hop growers. *Hoptopia* offered a new potential to connect with citizenships across the globe, activity that dated from Ezra Meeker’s and other early Pacific Northwest hop growers’ efforts to link the Pacific Northwest to European and English hop producers.  

Although the vibrant pre-prohibition flavors and aromas did not tingle American beer palettes throughout the 1950s and 1960s, evidence of the success of the United States brewing industry was everywhere. The future boded well for Pacific Coast hop growers, including the dwindling number of those in the Willamette Valley. Still, the future with big beer required hop farmers to continue modernizing their business and agricultural practices to meet market demands. Growers would have to invest significant money to transform their operations to meet new standards of industrial farming. All the while, the public at large became less familiar with hops on a beer-to-beer basis.

**The Persistence of the Small, Multigenerational Hop Farm**

In 1953, the United States Hop Growers’ Association convened in Portland for their seventh annual meeting. The presence of Oregon governor Paul L. Patterson and Portland Mayor Fred Peterson indicated that, despite ongoing struggles, hop agriculture remained an important aspect of the state’s economic and social identity. Keynote

31 Herman and Vernice Goschie, interview by author, Goschie Farms, Inc., Silverton, Oregon, August 18, 2008; John Annen, interview by author, Annen Brothers Farm, Mt. Angel, Oregon, March 11, 2008.

speakers G. R. Hoerner and Dean Walker reminded the attendees of the importance, offering their expertise to colleagues from California, Washington, and Idaho. Although it would be the last meeting of their national hop growers’ association, the group diligently confronted a variety of topics related to the changing hop industry. Major issues on the agenda included how to best integrate with the expanding world of corporate brewing and the threat of the growing market for minimally hopped lagers. Specific discussions related to a new marketing agreement that limited production per farm, the dire need for mechanization of harvests, and general research goals to improve crop productivity and commercial appeal.33

Members of the United States Hop Growers’ Association adjusted to market changes just as had their predecessors. Still, in the post-World War II era, they remained uncertain about their future. A “Twilight Beer Party” on the first evening of the convention may have eased the nerves of some hop growers. A tour of the Blitz-Weinhard brewery the following day prompted the industry journal *The Hopper* to report, “Generous samples of Blitz Bock beer and a special brew of light beer kept the visitors in such a cheerful glow during the rest of the morning that most of them were willing to overlook the low hopping ratio—at least temporarily.”34 The growers faced other pressing issues fundamental to American farming, too.

More than any other period in American agriculture, farmers in the World War II era and following fifteen years modernized their operations. The trend was toward postwar changes in the corporatization of American farms and connections to

---


transnational businesses, both for farming contracts and acquiring tools and other essential products for the farm. Perhaps, more significantly, the period marked the most dramatic and rapid integration of new science and technologies, including irrigation projects from the Bureau of Reclamation and adopting new machines and chemicals produced in wartime and later made for commercial purposes. Historian Deborah Fitzgerald argues, in Carey McWilliams’s words, that the process cemented the notion that American farms had become “factories in the field.” In other words, American farmers focused on efficiency and productivity, terms usually reserved for Progressive Era Taylorism and Fordism, while minimizing the role of individualized farm laborer.

Historian R. Douglas Hurt explains the larger socioeconomic ramifications:

[B]y 1960 farming had become more than a way a life; it was a business where only the most efficient survived. The days of the small-scale, diversified farmer were gone. Government policy in the forms of loans, price supports, and acreage reductions favored larger-scale farmers who could produce more for less cost than small-scale landowners.  


36 Deborah Fitzgerald, Every Farm a Factory: The Industrial Ideal in American Agriculture (London: Yale University Press, 2003). The notion of “every farm a factory or “factories in the field” roots to the New Deal Era writer Carey McWilliams, who brought the nation’s attention to the challenging working conditions of California farmworkers. See: Carey McWilliams, Factories in the Field: The Story of Migratory Farm Labor in California (Boston: Little, Brown and Company, 1939), 1939. Additionally, there is a growing body of scholarship that looks at these modernizing processes of American agricultural, including intense reclamation and industrialized farming as instrumental in global policy and application. See, for example, Sterling Evans, Bound in Twine: The History and Ecology of Henequen-Wheat Complex for Mexico and the American and Canadian Plains, 1880-1950 (College Station: Texas A&M University Press, 2007), 197-240; John Soluri, Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States (Austin: University of Texas Press, 2006), 75-127; Arturo Warman (trans. Nancy L. Westrate, Corn and Capitalism: How a Botanical Bastard Grew to Global Dominance (Chapel Hill: The University of North Carolina Press, 2003); 174-231.

The statistics complete the story: from 1940 to 1960 the U.S. farming population dropped from 23.3 to 8.7 percent. At the same time, the average farm size increased from 170 to 300 acres.\(^{38}\)

Much of the scholarship that addresses modernizing American agriculture centers on large-scale staple crops—wheat, corn, or cotton. The analyses pertain to specialty crop growers, but the Willamette Valley hop industry countered some of these trends. The expansion of big beer in the mid twentieth century had a tremendous impact on small Pacific Coast hop farmers. Additionally, hop growers became increasingly reliant upon sales to transnational hop dealers who recognized the importance of American hops to the world market. For example, Germany’s Barth and Steiner, two of the world’s largest hop dealers, established offices in New York and Washington, D.C. The John A. Haas Company, originally based in Washington D.C., opened a Yakima office by the 1930s.\(^{39}\)

---


\(^{39}\) “Big Business in Hops,” The Hopper, May 1953, 6. The Hopper noted, “Hass is the biggest hop grower in the world, the foremost exporter, and as a dealer handles a third of the crop sold in Washington. An Englishman who came to the United States in 1907, settling in Washington, D.C., he got his start in British Columbia. In 1920 he began buying hops in the Yakima Valley, and in 1930 he experimentally planted an acre of his own there.” And, “Today the Haas Company, with headquarters in Washington, D.C., operates a series of farms around Yakima of 180 to 700 acres each, plus more acreage in Oregon and California and holdings in Chilliwack and Lilooet, British Columbia. Now 72, Mr. Haas still is active head of the business, with his son, Frederick, serving as field commander.” Also see: S. S. Steiner, Inc., Steiner’s Guide to American Hops (New York: S. S. Steiner, Inc. 1973); Heinrich J. Barth and Christiane Klinke (trans. Ernest Sinauer, Chris Krason, and Alan Ross), The History of a Family Enterprise: Joh. Barth & Sohn, Nuremberg (Nuremberg: Joh. Barth & Son, 1994).
Larger world markets with a booming domestic market provided by big beer demanded more efficient and modern hop production. Descendants of families dating back to the late nineteenth century were still present in the 1950s. Their farms constantly adapted to new agricultural ideas, the most prevalent being integration of new hop varieties, varied stringing and trellis techniques, and new materials for fertilizer and pest and disease prevention. The multigenerational continuity on lands and an adaptable agricultural ethic assumed a central role in the Willamette Valley hop narrative, if not the entire agricultural history of the region. Oregon historian William Robbins notes the that “true believers always held to the faith that Oregon remained a land of possibility and opportunity.”

Developments in science and engineering contributed to make the fertile Willamette Valley an agricultural utopia in the postwar period. The regional hop culture was a part of the success story and scientific and technological information played a major role. Hoerner and Walker represented the newest Willamette Valley leadership in the post-World War II period, but their predecessors dated back to Ezra Meeker, Emil Clemens Horst, and James Seavey.

The most immediate and dramatic modernizing change for all Pacific Coast hop growers was the mechanization of harvests. The shortage of agricultural labor during World War II created a problem that begged for a mechanizing solution. As early as 1909, the E. Clemons Horst Company developed and advertised a “fifty feet long, fifteen feet

---

high, and ten feet wide” mechanical harvester that stripped vines of their cones. The company touted it as the fix for labor problems that surfaced nearly every year on the Pacific Coast, noting how the machine could do the work of 450 individual hand pickers and pick hops “absolutely clean and much better than human beings and at a big saving to the grower.” The Horst Company also suggested, “The worry on account of scarcity of labor is eliminated, and the consumer is assured of receiving hops vastly superior in quality over hand-picked hops.” 41 Unfortunately, these early models were expensive and unreliable, and did not solve the labor problem. For the next three decades, growers continued to rely on manual harvests.

With World War II, hop growers across the West Coast had to become even more creative in seasonal hiring or leave hops on the vine unpicked. Many sought out more women than ever before, believing that their agility and availability made for the best source of labor anyway. 42 Some growers turned to prison labor camps to meet their needs, while others embraced the national Bracero program that opened the doors for Mexican nationals to harvest crops in the United States. All growers continued to advertise across urban and rural areas for families interested in the late summer harvest. But, still, there were often insufficient numbers of workers. 43


Mechanical harvesters, improved upon since Horst released the first model in 1909, became a viable option. Although expensive, the improved machines of the 1940s reduced the work of 1,000 hand pickers to less than fifty. By 1944, *The Hopper* declared that the future of the harvest rested with machines.\(^4^4\) The result was a fast, efficient harvest, but also the end of the “hop picking time” in Oregon’s rural communities. Fewer laborers or crews now cut vines, transported, and fed them into mechanical pickers. There, a series of belts, sorters, and shakers separated hop cones for drying. Efficient and effective, the machines became the new mechanical face of “hop picking time.”

In 1947, the Goschie family of Marion County, Oregon became one of the first Willamette Valley hop growers to purchase an expensive mechanical harvester. For the father Carl (who first planted hops outside of Silverton in 1904) and son Herman (who took over part of his father’s land in 1941, and later expanded the business), the investment represented dedication to the industry in an uncertain time. Their first portable mechanical harvester moved about the field. But, recognizing its importance, they collectively upgraded to a larger stationary model a year later. At a cost of $40,000 this large contraption that took up an entire building changed the landscape of the hop farm and caused fundamental changes in the hop industry. Mechanical pickers marked the most visible transition from preindustrial to industrial harvest methods. For Carl and Herman Goschie, the new technology meant investment and debt, but signaled that the family was willing to take risks—even if the sustainability of Willamette Valley hop agriculture remained uncertain.\(^4^5\)

\(^{44}\) “Picking Hops By Machines, *The Hopper*, October 1944, 8.

\(^{45}\) Herman and Vernice Goschie, interview by author, August 18, 2008.
The Goschie’s gamble paid off, as did those of other hop growers willing to invest in mechanical harvesters throughout the 1950s. Not only did the transition to industrial harvest benefit their own operations, but they were able to contract the machine’s use to other smaller hop growers, an arrangement that became commonplace in the 1950s across the Pacific Coast. By 1951, the British Hop Productivity Team estimated that eighty-five percent of Americans used the technology to harvest their crops.\textsuperscript{46} The emergence of the technology created broader changes. Smaller farmers could not afford the machines and faced increasing difficulties in staying competitive. Other technologies compounded the issue. Industrial tractors, plows, and sprayers that wheat, corn, and tobacco growers had adopted by the 1920s, became available for a hop agriculture that had smaller rows and high-climbing vines. By the end of the 1950s, Pacific Coast hop growers needed all of these new technologies to remain competitive. Those who hesitated to mechanize left the business.\textsuperscript{47}

Beyond mechanization of operations at midcentury, hop growers also changed how they cultivated and tended their crops. From the Meekers’ operations in the 1860s to World War II, Pacific Northwest hop growers followed practices dating back to Thomas Jefferson’s era. They determined that simply, manure and other organic fertilizers were the best option to improve soil quality; they used nicotine and other organic compounds to control pests and disease. Based on late nineteenth century science, Willamette Valley hop growers also imported whale oil and quassia chips to combat outbreaks of pests and


\textsuperscript{47} Herman and Vernice Goschie, interview by author, August 18, 2008.
diseases. They continued to utilize these methods even after the outbreaks of downy mildew in the 1930s until shortages during World War II.\textsuperscript{48} At that time, some growers turned to creative solutions for pest control, such as the use of ladybugs to combat aphids.\textsuperscript{49} However, most growers sought another organic solution: planting the first new hybrid hop varieties released by England’s Wye College, the most respected hop breeding program in the world. The Brewers Gold and Bullion varieties created by E. S. Salmon released in the early 1930s showed promise in the Willamette Valley environment. Growers valued these varieties for their resistance to plant diseases, high yields, and balanced flavoring and aroma qualities sought by brewers across the globe. In Oregon, Salmon’s new hops proved vital in the 1930s and 1940s, when other varieties fell to the devastating outbreak of downy mildew. The adoption demonstrated the value of hop hybrids as a central organic solution to agricultural problems.\textsuperscript{50} It also set a precedent for collaboration between big beer, small farmers, and government scientists, as Salmon established the first experimental plots and germplasm exchange programs

\textsuperscript{48} “Tobacco Dust Has Also Gone to War,” \textit{The Hopper}, February 1945.

\textsuperscript{49} “Fifty Million Lady Bugs Can’t be Wrong,” \textit{The Hopper}, August 1945, 6.

\textsuperscript{50} Wye College Department of Hop Research, \textit{Annual Report, 1953} (Wye, England: Wye College Department of Hop Research, 1953), 5; Miller and Highsmith, Jr., “The Hop Industry of the Pacific Coast.” Plant breeding, of course, is an activity that dates to the agricultural revolution ten thousand years ago. The notion of hybridizing useful species proliferated with corn, rice, and other grains over the centuries; and more recently, specialty crops have emerged through cross-pollination and grafting programs. For his plant breeding work in New York and California, Luther Burbank has been rightfully christened as the father of many important crops we have today: the Russet Burbank potato, elephant garlic, California poppies, and scores of other botanical brethren. As much as the legendary Burbank championed new species of plants, though, he never generated a new variety of hop—a crucial Pacific Coast cash crop that emerged at the same time that he matured his profession in Santa Rosa, California. See: Jane S. Smith, \textit{The Garden of Invention: Luther Burbank and the Business of Breeding Plants} (New York: Penguin, 2009). On the expansive influence of horticultural in the U.S., see: U. P. Hedrick, \textit{A History of Horticulture in America, to 1860} (New York: Oxford University Press, 1950); Philip J. Pauly, \textit{Fruits and Plains: The Horticultural Transformation of America} (Cambridge: Harvard University Press, 2007).
with assistance from the English government and private brewers, a model adopted in the United States by midcentury. Still, the English advances made it clear that the science on the Pacific Coast lagged behind.

Even with some success from these natural methods of disease and pest prevention, World War II once again contributed to fundamental transformations in hop agriculture. Chemical companies repurposed wartime products used in tropical areas for combating foliage and insects for tactical and health reasons. In peacetime the chemicals proved useful to American agriculture and insect control. DDT became the most common of these products, but other chemical pesticides and herbicides—particularly the herbicide 2, 4-D also proliferated. Farmers across the country, including Pacific Coast hop growers, turned to these chemical solutions. They also turned to synthetic nitrogen for fertilization. R. Douglas Hurt has noted, “Although some people questioned the effects of chemical pesticides and herbicides on public health most farmers believed the postwar chemical industry had ushered in a ‘golden age.’”¹⁵¹ The Willamette Valley, too, joined the chemical parade.

Hop growers feared not just downy mildew and continued fights with hop aphids and red spider mites, but also the threat of other diseases and pests. Chemical companies offered growers a safeguard for their crops. By the mid-1940s, The Hopper ran cheerful and heroic ads from chemical companies proclaiming their effectiveness. While some growers worried about the applications, the chemicals rapidly worked their way onto and into the Willamette Valley landscape. As early as 1945, The Hopper contained an

---
¹⁵¹ Hurt, 116.
advertisement for DDT that mentioned its benefits, even if the ad noted that further study on its impact was needed. Despite some uncertainty, Willamette Valley growers embraced the new chemical. But DDT was far from the only chemical advertised to and adopted by Willamette Valley hop growers. A 1946 issue of The Hopper included an article entitled “A Substitute for Nicotine,” that noted the following:

The Monsanto Chemical Company recently announced the availability of a new insecticide that carries the name Hexaethyl Tetraphosphate….Used in conjunction with DDT, the new product tends to maintain the balance of nature, rather than upset the balance as DDT sometimes does when used alone.

This ad referred to Vapatone, the commercial name for Hexaethyl Tetraphosphate (developed in Germany during World War II to combat mosquitoes), and sold by Ortho brand to hop growers as insect spray for aphids and red spiders. Another ad, from 1947, elaborated on the importance of this new spray, with Frederick J. Hass, Vice President of one of the larger hop dealers (John I. Hass, Inc.) suggested that Vapatone “has promising possibilities in checking hop aphids especially when it is applied by means of fog-generating machines.” He noted specifically, “Vapatone insect spray, a new insecticide, has proven to be an extremely effective control for hop aphids and mites when used as an Aerosol fog.”

DDT and Vapatone marked just the beginning of the transformation of hop growers from organic pest controls and fertilizers to industrial chemicals. In 1947, The

---


54 Ibid.

*Hopper* announced the Besler Corporation’s “Death-Dealing Fog For Insects…the GENUINE FOGGER.”

In 1950, chemical efforts to combat downy mildew strengthened, particularly Dithane, “a fungicide produced by Rohm & Hass Company, Philadelphia.”

A year later, the American Cyanamid Company advertised for Parathion that “Gives Outstanding Control of Aphids, Mites, With No Effect of Hops or Brews.”

Charles R. Joshston, a Willamette Valley hop grower purported the usefulness of that chemical, noting in a following edition of *The Hopper*, “Cyanamid is applied in early February at the rate of 2 ounces per hill, spread evenly over the entire crown to kill volunteer weed growth and also as a fertilizer and soil sterilant.”

In the same article, however, he expressed the importance of natural fertilization and cultivation techniques such as planting rye cover crops and spreading manure. His note provided a reminder that organic agricultural methods remained intact even if farmers turned to industrial chemical solutions.

While effective, industrial chemicals like DDT and Dithane, often marketed as harmless herbicides and insecticides, caused substantial damage. They polluted watersheds and disturbed ecosystems. They contributed to health problems in human populations.

While some farmers, as R. Douglass Hurt suggests, might have been hesitant in the rapid transformation, it was not until Rachel Carson’s *Silent Spring* in

---

56 *The Hopper*, December 1947, 10.


58 *The Hopper*, August 1951, 5.


1962 that American society became aware of the dangers of DDT and other chemicals of industrial agriculture. But chemical dangers were not the immediate concern of Pacific Coast hop growers. They embraced industrial agriculture seeking the same goals as always: to produce hops efficiently and reach as many markets as possible. As evidenced by a sustained industry and global growth, their instincts proved out.61

**The Emergence of the Oregon Hop Commission**

Amidst the transformational changes to the Pacific Coast hop industry, there loomed a strong possibility that the community of mostly small farmers were compromising their multigenerational identities through rapid modernization. Even with dramatic adaptations of big business and industrial agriculture, underlying problems of downy mildew and competition from Yakima Valley growers, the Willamette Valley hop community endured. Regional hop growers had always adapted to changes in the industry and anticipated their futures. By 1964, Oregon growers felt the need to create their own organization. The decision arose in part due to the disbanding of the United States Hop Commission.

Growers Association nine years prior. But the organization also arose as Oregon growers sought to address their unique set of challenges.  

The first official meeting of the Oregon Hop Commission occurred in the State Department of Agriculture Building in Salem, on the afternoon of June 3, 1964. The crowd included individuals with deep connections to the industry—most, if not all, being second and third generation hop growers. Members included Vic Annen, Robert Coleman, Harvey Kaser, Ed Crosby, Roger Kerr, and Herman Goschie. Like the Portland meeting of the United States Hop Growers Association ten years prior, Oregon governor Mark Hatfield was also supposed to be in attendance, but “due to illness, was unable to be present.” Even though by that time the number of Willamette Valley hop growers had dwindled to its lowest number since the early 1880s, the governor’s intent to participate provided a nod to the importance of the state’s hop industry. Unfortunately, answers to the pressing issues of disease and reduced market share dating back to the Great Depression and World War II remained elusive. As had happened in their already nearly 100-year history, their efforts for success would be a recipe of hard work and collaboration with the federal government, scientists, corporations, and agriculturalists.  

In the months that followed their first meeting, the members of the Oregon Hop Commission elected officers and established a funding program based on pounds of hops sold from each farm. By the end of the year, they also adopted the following guidelines largely tied to the still vibrant research program at the USDA’s Agricultural Extension Center in Corvallis:  

---

63 Oregon Hop Commission, Minutes, June 3, 1963.
1. Sponsor research studies including but not limited to:

* Adaptability of Oregon-grown varieties to new or Improved methods of preparation or processing for Market.

* New or improved varieties for improved quality and Yields.

* Market preferences and how best to meet them.

2. Apply research findings and other available information to educational and promotion program for broadening of market demand and returns to Oregon hop producers.

3. Study legislation, state and federal, with respect to tariffs, duties, reciprocal trade agreements, import quotas and other matters concerning the effect on the commodity industry, and represent and protect the interests of the commodity industry with respect to any legislation or proposed legislation or executive action which may affect that industry.

4. Cooperate with any local, state or national organization or agencies, whether created by law or voluntary, engaged in work or activities similar to that of the commission, and enter intro contracts with such organizations or agencies for carrying on joint programs.  

All of these points had been pursued in years prior, and, in many ways, reflected ongoing concerns that the larger United States Hop Growers’ Association had addressed previously. Nevertheless, their list of goals demonstrated that problems persisted for Oregon and other Pacific Coast hop growers. The goals also revealed that, despite advances in marketing and corporate sponsorship, scientific research had not developed satisfactorily. That is to say, the Oregon Hop Commission believed that American hop hybrids had potential to save their industry, and they were willing to fund breeding

---

64 Oregon Hop Commission, Minutes, November 17, 1964, 2.
programs and offer test acreage. More than anything, the Willamette Valley growers wanted better hops, genetically matched with the regional environment to be high yielding, disease resistant, and appealing to brewers.

Little did Vic Annen, Robert Coleman, Harvey Kaser, Ed Crosby, Roger Kerr, Herman Goschie, and their peers in the Oregon Hop Commission know that change was just around the corner. In reaction to Rachel Carson’s efforts and rising popular concern about industrial toxins in the 1960s, the USDA expanded funding for agricultural breeding programs across the nation, including hops, in the hopes of reducing inorganic herbicides and pesticides. In the Agricultural Extension Center in Corvallis, the funding created a new position for an Austrian plant geneticist named Alfred Haunold. Although his initial hire in 1965 dictated general work across the hop research program, extenuating circumstances thrust him into the central role of hop breeder soon after he moved to Oregon. The necessity for this rapid change could not have come at a better time. When he attended his first meeting of the Oregon Hop Commission in 1968, Haunold had already delved deep into the horticultural work that would redefine not only Hoptopia, but also global hop and beer culture.65

Alfred Haunold and the Hop Breeding Tradition in Corvallis

In 1929, Alfred Haunold, was born in Retz, Austria, an agricultural region known for its viticulture. He was the first son of a secondary school teacher and a musically inclined homemaker. While he appreciated his parents’ talents, he found his own interest

65 Oregon Hop Commission, Minutes, 1968.
in science, particularly botany. Throughout his youth, Haunold was partly inspired by an uncle who had graduated from the Agricultural University of Vienna, and he knew by his teenage years that he would follow a similar path. Haunold attended prep school with a track for agricultural studies, and eventually earned college degrees from the Agricultural University in Vienna. By 1953, he obtained a doctorate in plant production with an emphasis in wheat breeding.66

Although Haunold grew up within hours of the hop growing centers in Bavaria and Bohemia, he never encountered the plant in his studies. His career path continued in wheat genetics. After his graduate work in Vienna he obtained a postdoctoral Fulbright Scholarship to work at the University of Nebraska. After just one year, however, the Austrian government asked him to return. He did, but to an unsatisfactory desk job as an auditor. Haunold’s heart lay in fieldwork and plant breeding. Still unmarried and eager to explore possibilities outside of his home country, he wanted more than a desk job working for the Austrian government. Much to his satisfaction, his contacts at the University of Nebraska asked that he return. He gladly accepted the offer, and would never live in Austria again. Once back in the states, Haunold worked on wheat and corn genetics. The projects allowed him time to take more classes at the University of Nebraska and finish an American Ph.D., as well as marry and start a family. With these responsibilities coming into place, it once again appeared that he was on track for a life as

66 Alfred Haunold, interview with author, Oregon State University, Corvallis, Oregon, June 29, 2009.
a plant researcher and breeder, but after several promising years in the Great Plains, funding for his program disappeared in 1964.67

After another yearlong stint trying to work behind a desk, this time for the Smithsonian Institution in Washington, D.C., Haunold applied for a newly opened position with the USDA in hop research at Oregon State College. He took the job as a general researcher with goals of improving agricultural methods and breeding. When his predecessor Stanley Brooks quit unexpectedly to become a USDA administrator, Haunold was forced to take on much more. Even with a minimal background in hops, he assumed the directorship of the breeding program a year after he moved to Oregon.68

Haunold inherited a program that began at the turn of the twentieth century. Although its breeding program did not begin in earnest until 1930, his predecessors laid an extensive foundation.69 They successfully introduced new cultural methods for hop growers, and engaged in substantial outreach. They published peer reviewed and popular articles, contributed to radio shows, and conducted meetings with growers in the Willamette Valley and brewers across the nation. In doing so, they set up lasting relationships with local growers, planting prospective new varieties in private test acreages. Carl Goschie, Henry Annen, Bill Annen, F. E. Needham, and Arch Sloper

67 Alfred Haunold, unpublished resume; Alfred Haunold, interview with author, Oregon State University, Corvallis, Oregon, June 29, 2009.

68 Ibid.

69 For the general history of the Oregon Agricultural Experiment Station, see: Oregon State University Agricultural Experiment Station, 100 Years of Progress: The Oregon Agricultural Experiment Station, Oregon State University, 1888-1988 (Corvallis: Oregon Agricultural Experiment Station, College of Agricultural Sciences, Oregon State University, 1990). For the larger history of Agricultural Experiment stations, see: Norwood Allen Kerr, The Legacy: A Centennial history of the State Agricultural Experiment Stations, 1887-1987 (Washington, D.C.: Missouri Agricultural Experiment Station, University of Missouri-Columbia, 1987).
collaborated in the 1930s, and others, such as the James Seavey Hop Company, joined in the following decades.\textsuperscript{70} Haunold’s predecessors also engaged in substantial international outreach, collaborating with industry representatives from around the world. By this time, the program established lasting exchanges of knowledge and plant material with leading scientists not only in central hop regions of Germany, Belgium, and England, but also the Soviet Union, China, and scores of other nations. These were all activities that continued throughout Haunold’s tenure.\textsuperscript{71}

In 1930, USDA agronomist E. N. Bressman spearheaded the official hop breeding program in Corvallis. He was inspired by Wye College’s E. S. Salmon’s successful hop crosses in the previous decades. He gained knowledge and plant material from publications and correspondence from Salmon and other scientists from around the world. In the horticultural tradition that expanded after Gregor Mendel introduced plant genetics in the late nineteenth century and drew renewed attention in the 1930s and 1940s, Bressmen’s initial efforts entailed selection of promising young hop plants and cross-pollinating them with others.\textsuperscript{72} In one of his first reports, he described the thought process of initiating the program:

\textsuperscript{70} D.D. Hill, “Report: Hop Analyses, 1937-1938,” Corvallis: United States Department of Agriculture and Oregon Experiment Station, 1938, unpublished report, Box 21, Agricultural Experiment State, Record Group 25, University Archive, Oregon State University, Corvallis, Oregon.


\textsuperscript{72} For histories of Mendel and genetics, see: Peter J. Bowler, \textit{The Mendelian Revolution: The Emergence of Hereditarian Concepts in Modern Science and Society} (Baltimore: Johns Hopkins University Press, 1989);
In the first place, there are many things besides resistance to downy mildew that must be considered. A desirable hop must have ability to yield and be of the quality desired by buyers. All of this information must be garnered before a breeding program can begin. The writer attempted to get this information by contacts with a large number of growers on all the important hop growing sections of the Pacific Northwest. This necessitated visits to many yards both in the fall of 1930 and the season of 1931.

The general plan of this hop breeding project is to grow seedlings from superior plants noted in various yards, seedlings from hybrids between varieties which show indication of either mildew resistance or yield and quality, make selections of superior plants, and obtain introductions from foreign sources. In the preliminary and beginning work all of these things have been accomplished. Many seedlings from seed obtained in growers’ yards have been grown. Hybrids between Fuggles and the ordinary Late Cluster variety have been obtained and the M45 variety which is the best downy mildew resistant variety from England has been secured. 73

Within this framework, Bressmen moved to more advanced breeding techniques. In an article published in Science, he noted how he chilled seeds “for about ten days at freezing temperatures and then scarified by rubbing on coarse emery paper” before planting. After germination, artificial light in his greenhouse promoted rapid growth. He described the process:

The use of chilling and scarification of seed, the greenhouse, and the lights are of great assistance in speeding up a program of breeding with crop of this type. The striking variability of seedlings indicates a great difference in the value of the different plants. Of course, it will take additional time to test out not only their disease resistance, but also their yielding ability and quality. 74


In short, Bressmen was well organized and eager for results, largely relying on the rediscovery of Mendelian genetics at the time of his own appointment. But success did not materialize quickly.

Much of the hard work of hop breeding was in the waiting. It could take several years to cultivate mature potential hybrids and several more to test for desired qualities. In a 1932 report Bressman quoted the British hop breeder E. S. Salmon:

[T]he work of raising new varieties of hops is an arduous and expensive one and is necessarily very slow, since, the seedling plants do not bear a crop until the third year, and cannot be judged for character such as aroma, richness in resins, and cropping powers until the fifth year, at the earliest.\textsuperscript{75}

The lengthy time requirements explain not only the immediate lack of success under Bressman but also his successors in the next two decades. Nevertheless, they diligently expanded the program, looking more than ever to developing more international relationships. From the 1930s to the 1950s the Corvallis scientists often exchanged plant material and knowledge with counterparts in Europe, Africa, India, and China. Amidst that process his successors never took their eyes off of the local and national. In 1938, Bressman’s successors R. A. Fore relayed an exciting development:

In addition to these various meetings and delegations of growers in the experimental yards, there have been many individuals from all parts of Oregon and other states visit the experimental yard. An outstanding visitor was Dr. Rexford Tugwell, Assistant Secretary of Agriculture, who, on August 31, observed the work in the experimental hop yard with great interest. It requires

\textsuperscript{75} E. N. Bressman, “Report of Hop Breeding Project, Sept. 3, to Dec. 31, 1931,” 8, Box 21, Agricultural Experiment State, Record Group 25, University Archive, Oregon State University, Corvallis, Oregon.

considerable time to show these things to visitors but in nearly every case much is gained from the practical experiences of many of these hop growers.\footnote{R. E. Fore, “Report of Cooperative Hop Breeding Project: Division of Drug and Related Plants, Bureau of Plant Industry, United States Department of Agriculture and Oregon Experiment Station, Corvallis Oregon,” Jan. 1, 1937 to Dec. 31, 1937,” Corvallis: Oregon State Agricultural College, 1931, unpublished report, 3-4, Box 21, Agricultural Experiment State, Record Group 25, University Archive, Oregon State University, Corvallis, Oregon. Bressman described how he answered letters not just from OR, WA, and CA about hop growing, but also NY, FL, PN, OK, MI, NC, LS, AZ, MN, VA, OH, TN, CN, TX, IL, NW, Mass., CO, and Mexico—clearly demonstrating that people wanted in on the business.}

Similar high profile interest remained as Bressman and Fore turned their work over to D. D. Hill and Stanley Brooks in the following two decades. But breeding results were not forthcoming. The Agricultural Experiment Station in Corvallis failed to release any new hop varieties to the public into the 1960s.

While the USDA and big beer might have been discouraged by the lack of results, hop growers were the most disappointed. The high hopes for the breeding program at Corvallis faltered and left more uncertainty. To make matters worse, Stanley Brooks, the most promising director of the hop breeding program who took the position in 1955, unexpectedly quit in 1964. Yet, he and his predecessors left behind a wealth of horticultural knowledge and thousands of hop plants obtained from crosses and open-pollinated seed collections in the previous three decades. In particular, Brooks left behind a promising hybrid, a hop plant simply named USDA #56013, the bastard offspring of an English Fuggle variety and an unknown male pollinator. It was up to his successor, Alfred Haunold, to realize the full potential of the cross breeding.\footnote{Alfred Haunold, interview with author; Alfred Haunold, “Personal Reflections on 30 Years of Hop Breeding” (unpublished document), Corvallis, Oregon: Alfred Haunold, 2007.}

After taking over breeding duties, Haunold kept a close eye on all promising crosses. He often found the work at times challenging and less rewarding than working in
wheat genetics. But, like his predecessors, he remained diligent, corresponding with
scientists from around the world, making thousands more crosses, and taking copious
notes to document the efforts of his team. A certain amount of pressure mounted as the
Corvallis hop breeding program had not once released a new variety to the public in
thirty-five years. Despite a tremendous work ethic and dedication to his new vocation,
Haunold almost abandoned the project to continue his career elsewhere in the late 1960s.
In the meantime, as he advanced testing on USDA #56013, he noticed potential. He put
the promising plant through more field and brewing tests. The hop delivered in a way that
no other had, particularly for its disease resistance to downy mildew and its appeal to
brewers. Nearly forty years of frustrating results in Corvallis was about to change.78

In 1972, the Corvallis program released USDA #56013 for commercial use.
Haunold and his team named it the Cascade, after the looming mountain range standing
on the eastern edge of the Willamette Valley. Not only was it a sign of momentous
change in the entire hop world and a potential savior for Willamette Valley hop
agriculture, but its release coincided with a major international hop shortage and pleas
from American brewers for an increase in domestic hop supplies.

**Oregon Hop Hybrids: Toward a Revolution in Growing and Brewing**

In 1971, Coors Brewing Company of Golden, Colorado faced a crisis. Just
emerging as a national power in the beer industry, their supply of Hallertau-mittelfruheh
hops—the finest Bavarian variety—fell short and the company faced an uncertain future.

To maintain their competitive momentum with Anheuser-Busch and Miller, the brewmasters and management recognized the need to establish an additional source for their hop supplies. To the best knowledge of those in the business, the Cascade hop was the closest match to a noble European variety in its balanced bittering and aroma characteristics.\textsuperscript{79}

Shortly after their discovery of the Cascade, Coors offered Oregon and Washington growers—for whom the hop had been designed—a momentous deal that changed the nature of the industry. If the farmers planted new acreages of the recently introduced hop, they would earn one dollar a pound. The price was unheard of compared to the approximately fifty cents that growers earned for other varieties. The offer transformed not just Oregon but the entire Pacific Northwest hop landscape from producing a number of English varieties to producing the Cascade on an industrial scale. Coors signed multiple-year contracts with Cascade growers and within a couple of seasons had turned to Haunold’s hop for one hundred percent of their brewing needs. It was an apparent win for Coors, Pacific Northwest farmers, and the Crop Science department at Oregon State University. There was, however, a drawback.\textsuperscript{80}

After Coors turned exclusively to the Cascade, their loyal imbibers began to notice a different taste in their lager. Haunold recalls complaints that after two beers the taste was too strong. Whereas the new hop variety appeared an adequate replacement for the Hallertau-mittelfruh, the decision for total replacement had come too soon. Brewing


chemists later discovered that while there was a balance between bittering and aroma acids, the qualities of the Cascade were actually quite different from the noble European variety. Because of their contracts, Coors continued to use Cascades in their beers, but they incorporated them in blends with other hop varieties. The brewing company began to look elsewhere for a new source of hops and Pacific Northwest growers once again searched for a new hop variety. Haunold and his colleagues came under additional pressure to develop new hop strains to better serve American brewing needs.  

Despite the eventual outcomes, the Coors-Cascade connection underscored a vast transition in American and international brewing recipes and hop agriculture. Following three-quarters of a century as a world-leading producer of hops in the Pacific Northwest, growers had for the first time commercially planted a variety created specifically for them. Prior to the release of the Cascade, nearly all varieties grown were of English origin, or English-North American hybrids created in England. While not ideal for Coors in the long term, the Cascade proved to have lasting power because of its relative quality and cheapness as compared to imported hops. It also proved, after decades of unsuccessful breeding programs at Oregon State University, that American hybrids could meet the high standards of older hop varieties and could be used with good commercial results.

Concurrent with the Cascade release, Haunold and his colleagues started receiving positive feedback. But not just from brewers and hop growers. In the midst of

---

Vietnam Era counterculture that derided conformity and embraced sex, drugs, and rock and rock, word spread about the new hop cross developed in Corvallis. Hopeful amateur horticulturalists recognized *Humulus lupulus* as a genetic cousin to *Cannabis sativa*, and sent inquiries about the potential of another cross-breeding venture. In his yearly reports, Haunold took notice of the trend. In 1970, he noted:

> During the past year we received an unusually large number of requests for hop seed, as well as for rhizomes…We have in the past supplied a limited amount of hop planting stock to back yard gardeners. It appears now that the close botanical relationship between *Humulus* and *Cannabis* has been publicized along with some research done during World War II which apparently showed that the active ingredients in hemp (Tetrahydrocannabinol, etc.) can also be found in hop leaves when a hop scion is grafted onto hemp rootstock. Whether this is indeed so is not known at this time, but it explains the flood of requests for hop seed and planting stock.\(^82\)

Although Haunold tried to explain that the crosses would not work, he received more mail in the early 1970s on this topic than any other. Other, more serious, feedback offered Haunold a renewed sense of purpose. With the success of the Cascade in 1972, he set out with new enthusiasm to create hybrids that adapted both to the regional landscape and climate as well as brewers’ palates.\(^83\)

For the rest of the 1970s, Haunold continued to engage in an extensive exchange of biological specimens and knowledge with scientists in many countries around the

---

\(^{82}\) C. E. Horner, Alfred Haunold, and S. T. Likens, “1969 Annual Report of Hop and Mint Investigations: Breeding, Genetics, Chemistry, Pathology of Hops and Mint,” Corvallis: Oilseed and Industrial Crops Research Branch, Plant Science Research Division, Agricultural Research Service, United States Department of Agricultural, in cooperation with Oregon Agricultural Experiment Station, 1970, 8. Haunold pointed to a particular book by Bill Drake entitled “The Cultivator’s Handbook of Marijuana.” The book contained a chapter entitled ‘Producing an Unrecognizable Hybrid,” and the author stated that the way to produce an unrecognizable ‘hybrid’ of hops and marijuana is to graft hop tops onto marijuana rootstock. The resulting growth (hop plant) is stated to contain the active ingredients of marijuana, and scientific literature is cited to substantiate that claim. The book further states that the best hop plants to use are the ‘polyploid’ varieties, Bullion and Brewers Gold.”

\(^{83}\) Alfred Haunold, interview with author, June 29, 2009.
world. As an Austrian by birth, however, other European scientists and growers ridiculed him for his assistance to the United States industry—particularly at the 1972 international hop convention in Europe when he was showing off the Cascade. Nevertheless, Haunold maintained global connections while remaining firmly rooted in the local. He worked extensively with Pacific Northwest growers and their professional organizations. He continued to familiarize himself with the landscape and climates of the Willamette Valley in Oregon and the Yakima Valley in Washington. He worked with representatives of the United States Brewing Association to determine the needs for domestic hop use.  

Prodded by large brewers and regional growers, Haunold’s breeding program expanded in the early 1970s. After the Cascade, the USDA released several additional varieties to the public. Haunold, in collaboration with his colleagues at the agricultural experiment stations in Oregon and Washington, and the United States Brewers Association, released the Comet in 1974. The result of 1961 cross between a “Sunshine” hop and a wild hop from Utah, it had higher alpha acids (bittering) than other varieties grown and it tested well against several plant diseases. Mostly, it was designed for the Yakima Valley in Washington where “high-breeding value varieties such as ‘Bullion,’ ‘Talisman,’ and ‘Brewers Gold’ are poorly adapted.”  

Despite the improvements, the Comet never caught on in a similar way as the Cascade. But momentum in the program continued.

---

84 Ibid.

Even with lukewarm reception of the Comet, hop acreage in the Pacific Northwest changed as American brewers continued to invest and believe in American hybrids. Recognizing that their ongoing persistence and dedication to these projects paid off in the early 1970s, the Oregon Hop Commission optimistically planned for the future. In a January 1974 meeting, the organization reported, “[T]he fastest growing breweries are all using the ‘Specialty’ hops grown in Oregon.” Upon that note in the meeting minutes, the text continued, “Beer consumption is increasing 3 to 5% annually. We must concentrate on meeting the supply demands.”

A year later, the organization noted that Anheuser-Busch, in particular, made a strong commitment to the use of American hops. Meeting minutes from April of 1975 reported, “The situation is the best in the U.S. it has been in many years, especially Oregon because of the varieties preferred by Breweries.”

After a long period of decline in production and uncertainty about the future, Hoptopia’s prospects were on the rise.

Amidst this optimism, Haunold remained focused on still larger goals. Upon successful release of the first American hop hybrids, Haunold turned his attention to other pressing demands of the hop industry: the creation of a seedless hop that met standards of disease resistance, high yields, storability, and quality in brewing. In these tasks his background in wheat genetics dovetailed with his new research. Since the 1940s, scientists working wheat, tobacco, cotton, and scores of other valuable crops had introduced a revolutionary method of breeding called polyploidy, or the introduction of multiple sets of chromosomes to diploid plants (those with normally two sets of chromosomes).

86 Oregon Hop Commission, Minutes, January 16, 1974, 2.

87 Oregon Hop Commission, Minutes, April 30, 1975, 1.
chromosomes). In his own words, Haunold noted: “Polyploidy breeding is a technique for increasing the number of chromosomes of a given plant species. It improves the yield and quality of a crop. It was also be induced artificially with certain chemical treatments.” Whether natural or artificial, the benefit of introducing multiple sets of chromosomes allows for future evolutionary diversity of traits, including seedlessness. About his specific research Haunold commented, “This is a relatively new approach that has yet to lead to a commercially acceptable variety.” But his early tests on hops appeared promising. Haunold actually began polyploidy hop breeding tests soon after his arrival in Oregon. The decision and ingenuity paid remarkable dividends. In the early 1970s, Haunold’s experiments in the Oregon State University greenhouses and 20-acre farm largely centered on the introduction of polyploidy plants defined as triploid, or seedless, hops. It took nearly one year to double the chromosome number of Fuggle, an English aroma hop with acceptable resistance to downy mildew. The tetraploid Fuggle (double the original diploid chromosome number of the original) became the foundation for developing triploid aroma hops.

Oregon State University’s agricultural journal, *Oregon’s Agricultural Promise*, picked up on Haunold and his team’s breakthrough in hop breeding, particularly aspects

---


89 It is now accepted that polyploidy has occurred to seventy percent of angiosperms. The key, where naturally or artificially induced, was that plant species allow for extra sets of chromosomes to allow for future evolutionary diversity of traits. These are the reasons Haunold began polyploidy hop breeding tests in the late 1960s, to seek out new varieties that fit the needs of high yield, disease resistance, and storability, while all the while catering to the desires of brewers. It was a process that other plant breeders had turned to in large part by the 1940s. See: Jane Masterson, “Stomatal Size in Fossile Plants: Evidence for Polyploidy in Majority of Angiosperms,” *Science* 264/5157 (April 1994): 421-424; Joshua A. Udall and Jonathan F. Wendel, “Polyploidy and Crop Improvement,” *The Plant Genome (A Supplement to Crop Science)* 1 (Nov. 2006): S3-S4, S6.
of polyploidy. In 1974, the journal reported in great detail that is worth reporting due to its clarity of scientific language:

Two lines of triploid hops, having all the yield advantages of seeded hops but genetically sterile because they have three sets of chromosomes instead of the normal two (a diploid), are being developed by Alfred Haunold…the new lines are particularly promising as a replacement for Fuggle, one of the main hop varieties grown in the Willamette Valley and well accepted by certain brewers.

To stimulate yields, growers place enough males in their hop yards to produce hops with an 8 to 16 percent seed content. Pollination makes larger cones, stimulating yield by 20 to 40 percent, and the seeds add to the weight of the hops sold. However, brewers prefer seedless hops and pay a premium for them. They contend that seeds may have an adverse effect on beer flavor.

The two new triploid lines promise to offer both seedless hops and increased yields. Yields are stimulated by pollination, but no seeds are produced because triploids have an extra set of chromosomes causing a natural abortion to keep most seeds from developing after pollination.

Haunold developed the triploids by first doubling the number of chromosomes in Fuggle females to make tetraploids. Instead of the normal two sets of chromosomes with 10 chromosomes in each set, the tetraploids have four sets of chromosomes.

In 1967, the tetraploids were crossed with several selected male hops containing the two normal sets of chromosomes. The resulting seedlings—some 800 of them—were the first triploids. The seedlings were grown in a field nursery in 1968 and 25 of the most promising ones were selected for yield trials. The two new lines now under consideration were selected from this group.

The triploids also demonstrated resistance to downy mildew, but not so much wilt, as the Fuggle is susceptible. They did note, that brewing trials were favorable. Also: “Yield potential for triploid hops is approximately 2,000 pounds per acre, compared to the 1,350 pounds per acre for Fuggle. And they will be seedless.

If this year’s brewing trials go well, at least one of the triploid lines may be released as a new variety, after one more year of field testing.90

The tests did go well.

---

In 1976, Haunold and his colleagues released the first American hybrid triploids, or seedless hops. The team decided to call them the Willamette and the Columbia, named once again for the region in which they were created.\textsuperscript{91} Almost immediately, brewers took to the Willamette for its “exceptionally desirable aroma characteristics” as well as high yields and good disease resistance. As indicated in the official release, this resulted in “very low seed set when pollinated by fertile male plants. Therefore, growers receive the customary premium for seedless hops, regardless of pollination by fertile male hop plants.”\textsuperscript{92}

With the costs of importing European hops continuing to rise throughout the 1970s, the release of the two new triploids could not have occurred at a better time. Macro-brewers such as Anheuser-Busch, a large Fuggle customer, embraced the Willamette. Investments in plant breeding dating to the earlier part of the century from many parties paid off. The success demonstrated the scientific progress by Haunold and his predecessors, based on collaborations with multiple generations of Willamette Valley hop growers and agricultural scientists from around the world. The once dwindling Oregon hop industry experienced an uplift. By the early 1980s, Pacific Northwest hop acreage moved toward Willamette hops, although growers also continued with older English varieties and Cascades for local and international markets. Haunold, with his ingenuity and background in plant genetics, had solved several of the long-standing problems.


\textsuperscript{92} Ibid.
problems of West Coast hop production in his first ten years on the job. Still, he was not through.\textsuperscript{93}

In the late 1970s and throughout the 1980s, Haunold continued the tradition of publishing, media outreaching, and working with growers and brewers. After the success of the Cascade and Willamette varieties, he was able to acquire more funding from the USDA, the United States Brewers Association, and Pacific Northwest hop grower organizations. In part he used it for travels around the world. His goals were to acquire new scientific information and make contacts, as well as express American interest in expanding its presence in the international hop community. Haunold visited Mexico, Kenya, Japan, Australia, and New Zealand, along with West Germany, Yugoslavia, and England. Because of his success, competence, and charisma, Haunold became one of the leading ambassadors of the American specialty crop, assuring the Pacific Northwest a key role in both agricultural and brewing circles.\textsuperscript{94}

All the while, Haunold also kept up a rigorous and successful breeding program in Corvallis that sought to address new trends in the industry. In the 1980s, the hop industry moved toward high-alpha varieties, or those with high bittering attributes. With new techniques using CO\textsubscript{2} as a solvent, these proved economical for hop extracts. Haunold’s release of the Nugget variety in 1984 proved to be one of the most successful of the high- alphas. Pacific Northwest hop growers and brewers embraced the new hop and momentum continued.

\textsuperscript{93} Alfred Haunold, interview with author, June 29, 2009.

In the successful aftermath of the Cascade, Willamette, and Nugget, Haunold became determined to address perhaps the longest lasting problem in American hop agriculture: the inability of American growers to produce the noble hop varieties grown in Bavaria and Bohemia. Since the rise of industrial brewing in the mid-nineteenth century, brewers had coveted the Hallertau-mittelfruheh, Saaz, Tettnang, and Spalt hop varieties, but American growers only grew the better-producing English varieties. Haunold maintained his commitment to raise American hop industry onto a competitive level with the European producers. After multiple-year trials, he finally achieved success. In 1990, Haunold released the Mt. Hood, the closest U.S. hop ever bred to a Hallertau-mittelfruheh. Soon to follow were several similar types in the Liberty, Crystal, and Ultra. Growers and brewers embraced the hops with growers planting them in the field and brewers adding them to the vat. In the following years, Haunold released hybrids with the same qualities as the other noble Saaz and Tettnang, which were also embraced by growers and brewers.\[^{95}\]

As Haunold and his colleagues at Oregon State University and other agricultural extension centers developed and released increasing numbers of American hop hybrids, regional growers reaped the benefits. After sustained battles with downy mildew and other diseases and pests, the new hops repopulated their farms. By 1990, a majority of hops grown in the Willamette Valley were American hybrids that were better adapted to the area’s specific environmental conditions and ranked with the qualities of European

noble varieties. Because Americans continued to drink beer at one of the highest rates in the world, Willamette Valley hop growers saw a much more secure future than they had earlier in the century.

From the 1960s to the 1990s, Willamette Valley hop acreage expanded from approximately 3,000 to over 6,000 acres. The 1986 termination of the federal marketing agreement that limited the number of hops produced per farm contributed to the upsurge in acreage with growers determining their own production rates. Abandoning production controls also allowed new growers to enter the business. But Haunold and his colleagues in the USDA provided the most hope in their hop varieties bred for the Pacific Northwest. All the while, the same players dedicated to the success of the Willamette Valley hop industry embraced the developments in the field. Big beer benefitted from cheaper products and closer relationships with the agricultural producers of the spice of their beer. Small farmers relished in their opportunity to stay in business across multiple generations and challenges in the industry. While Vic Annen no longer grew hops or attended Oregon Hop Commission meetings, his son John did, as did the children of Herman Goschie and Robert Coleman. Meetings in the twenty-first century are now attended by Gayle Goschie and Dave and Mark Coleman. The Willamette Valley hop industry defied the odds because of collective efforts of all interested parties.

In 1995, Haunold retired from his position with the USDA at Oregon State University. A range of articles in local newspapers and agricultural and brewing magazines preserved his legacy. They praised him for bringing high yielding, disease resistant, and desirable hops to the domestic marketplace. As a representative for Anheuser-Busch noted, “He has probably done more for the U.S. hop industry in terms of
breeding than any other single person.”96 Still, his legacy should be much more than just his release of the Cascade, Willamette, Mt. Hood, and others for macro-brewers. While these were the hops that commanded the most interest from larger brewers—and thus hop farmers—Haunold also released many other varieties that never obtained similar popularity.

It falls short to suggest that Haunold’s legacy is only evident in bottles and cans across the world. Haunold is a humble individual who once noted that he is “just a common guy” and his life “was just a series of events.”97 Yet he was also a wonderfully dedicated scientist with keen historical sense. His reputation rests on nearly one hundred published articles and on the thousands upon thousands of plants cultivated, many now residing in the National Clonal Germplasm Repository-Corvallis established by Congress in 1981.98 His meticulous unpublished notes, documented in yearly USDA reports, often exceeded two hundred pages. The material he left behind reveals an understanding of historical and scientific processes, locally and globally connected over time through the exchange of biological specimens and information from Oregon to New Zealand. The work of Alfred Haunold provided and provides a vital link between small farms, big beer, and crop scientists from around the world. With his accomplishments in American hybrids, which colonized local acreages and global beers, Haunold emerged as the vital knowledge link that revitalized a Willamette Valley Hoptopia in the second half of the


97 Alfred Haunold, interview with author, June 29, 2009.

twentieth century. In a nation increasingly interested in craft beer, his legacy remains particularly important.

**Haunold’s Hops and The Craft Beer Revolution**

The story of *Hoptopia* would not be complete without explaining the developments in craft brewing that overlapped with Alfred Haunold’s work in Corvallis. For in the late 1960s, a craft beer revolution simultaneously unfolded along with the advancements in American hop breeding. A partnership was inevitable. It did not occur immediately, mainly because of legal obstacles and the fact that big beer, through their investments, monopolized the attention of governmental hop breeders. But, by the late 1980s and into the 1990s, the Pacific Northwest beer scene anchored on the hop varieties made available from Haunold and his colleagues in the USDA.

In the larger picture, the craft beer revolution intersected with counterculture trends in a period marked by the Vietnam War, the environmental movement, and the rejection of the bland 1950s and 1960s. On a localized level, American beer connoisseurs were frustrated with their beer options in grocery stores and bars. While popularly marketed brands like Miller Lite and Coors appealed to the general public, beer aficionados wanted more complexity and attention to the craft of brewing. European imports and homebrews offered some respite from the doldrums of American lagers, but a small and dedicated group of likeminded beer nuts wanted more. The founders of the craft beer movement desired beer with quality malt and hops, and they wanted beer varieties not limited to lagers. Transforming a national beer industry built upon the American lager, however, posed problems.
Most beer aficionados date the beginning of the craft beer revival to 1965, when Fritz Maytag, of the Magtag Company family, began brewing Anchor Steam beer in San Francisco. Uninspired by the macro beer brands available, Maytag took over a failing brewery and put to practice the idea of using quality grains and hops while attending to every detail of the brewing process. Although not immediately gifted with brewing excellence, Maytag drew praise and recognition for abandoning the use of rice or corn in malting and adding enough grain and hops to impart rich flavors in his beers. Persistence and dedication, perhaps, were his most valuable attributes. By the late 1960s, Maytag drew the attention of others in the Bay area who sought the buck the trends of big beer. Anchor Steam Beer drew a small following over time, but, more importantly, Fritz Maytag led a spirited charge for a new beer culture. As historian Mareen Ogle notes, “Maytag grasped what was lost on mainstream brewing: Out there was an audience eager for authenticity.”

In the 1970s, other brewers followed Maytag’s lead. The Leinenkugel brand in Wisconsin and Lone Star brand in Texas drew new attention to craft beer. So too did New Albion Brewing in Sonoma, California. But craft brewing remained a regional undertaking. Big beer continued to control distribution, and smaller brewers simply could not compete. Many individuals immersed in a growing homebrewing culture wanted to join the craft beer revolution, but found legal restraints regarding the amount of beer they could brew in one year. Ultimately, following a small, but loud, public outcry, the Jimmy Carter Administration passed the Cransen Law in 1979. The law allowed homebrewers to brew one hundred gallons of beer per year tax-free. The change did not affect many

---

99 Ogle, 265.
homebrewers who already brewed as much as they wanted without drawing notice, but it offered a door for leniency that brewers in the 1980s would walk through. While the Cransen Law was a small win that did not affect brewing companies seeking to make thousands of gallons of beer each year, the decision provided a new space for a craft beer culture.\footnote{Ogle, 288-293.}

The changes to homebrew law had an impact in inspiring new members of a craft beer community, and set a tone for states to begin eliminating restrictions on beer makers that overwhelmingly favored large breweries. Namely, states began providing licenses for small brewers to sell their beer at regional restaurants and bars, and eventually their own establishments. Oregon’s “brew pub law” of 1985, was one of the earliest state laws that better allowed craft brewers to sell their goods. The efforts spearheaded by a team of small beer makers—Art Larrance, Fred Bowman, Mike and Brian McMenamin, and Kurt and Rob Widmer—allowed Oregon to shine as a home to the craft brewing movement.

In the early 1980s, several brewers attempted to offer new “authentic” beers, or those imparted with quality ingredients and complexity. They, too, had tired of conformity of flavors in American food culture prevalent in the post-World War II period. At this time, however, craft brewers had enough time to learn from one another and to better figure out marketing. The task was an uphill battle against the Coors, Millers, and Anheuser-Busch crowd, but was one that was worth taking. In 1982, Boulder, Colorado hosted the first Great American Beer Festival, with twenty breweries participating by offering samples of thirty-five beers. It was a small sign of things to come. Breaking new ground soon after were Bert Grant and his Grant Brewing of Yakima, Washington, Paul...
Shipman and Gordon Bowker (founder of Starbucks) who created Red Hook Brewing in Seattle, and Ken Grossman who founded the Sierra Nevada Brewery in Chico, California. While Grants’ venture did not last long, the Red Hook and Sierra Nevada brands proved lasting. At the same time, Jim Koch founded Sam Adams Brewery in Boston, helping to create a coast-to-coast interest in craft beer. By the turn-of-the-century, the Great American Beer Festival in Boulder hosted hundreds of breweries and approximately 2,000 beers. The participants had the same goal dating back to Maytag: rescuing the American beer industry from the boring flavors imparted by lack of malt and hops, and lack of variety, and developing a sense of community related to a localized brewing tradition.¹⁰¹

The hop connection in the craft beer revolution was essential. Once buried with no distinction in American lagers from 1933 to the 1970s, the hop reemerged with vigor in the flavors and aromas of the craft brewers. Ironically, it was big beer that allowed for a wider range of hops in the American marketplace by sponsoring hop breeding programs through the USDA. The Coors relationship to the Cascade hop provides the best example, as the company initially embraced the hop and paid growers to plant it. But they abandoned reliance on it, realizing it imparted too much flavor for their lagers. The craft brewers seeking new flavors, aromas, and creativity in the brewing process seized the opportunity to use left over Cascade hops as the cornerstone of many of their ales.

Although Haunold had great success in introducing other hybrid hops to big beer—most notably the Willamette hop, the most commonly grown in the Pacific Northwest for larger breweries into the twentieth century—they disregarded most. Their

¹⁰¹ Ogle, 300-337.
goal, after all, was centered on marketing their light lagers, not introducing new flavors and smells. The hops rejected by big beer, however, became central to craft brewers. Whenever they could find a good crop of newly introduced hops or contract with a small hop grower to provide a small acreage, craft brewers celebrated. Haunold and his colleagues in the USDA continued to release new hop varieties as the craft beer revolution gained momentum, with his American “noble varieties” gaining significant attention and praise. By the turn of the twenty-first century, bottles of Pacific Northwest beer advertised the local Cascade hops and others used, and, more dramatically, brought out the flavors in their India Pale Ales, a signature brew of the region.

In the second decade of the twenty-first century, craft beer still accounts for less than five percent of the market share in the United States. But their presence is growing. Craft brewers have arrived in cities and towns across the country; one source even suggests that, given the U.S.’s predominantly urban population, the majority of its residents actually live within ten miles of a craft brewer. Given Oregon’s resurgence in hop growing, it would also be fair to conjecture that many of those breweries utilize hops from the Willamette Valley.

**After the Hop Rush**

In the early post-World War Two era, Oregon hop growers faced uncertainty. Downy mildew reduced the quality and quantity of Willamette Valley crops, and competition with Washington’s Yakima Valley relegated the once proud “Hop Capital of the World” to a distant second among American producers. Growers fought for continued success by incorporating technologies and practices of industrial agriculture, including
mechanized harvesters and synthetic herbicides and pesticides; they also introduced new hop hybrids released in the 1930s from England’s Wye College and collaborated with Oregon’s Agricultural Experiment Station in Corvallis to create hybrids in the United States. From 1930, when the program began, to the mid-1960s, there was little success with no new hop varieties released. But growers had other challenges, too. In the late 1940s and early 1950s, they feared for their livelihoods as big beer companies used fewer hops in brewing light lagers. Ultimately, tension eased as American consumers purchased ever more cans and bottles of the light beer, thus continuing a need for a domestic hop supply into the 1960s. To ensure future success and collaborations with brewing corporations and scientists, Willamette Valley growers formed the Oregon Hop Commission. The organization, which lasts into the twenty-first century, provided much-needed stability and leadership in a volatile period.

All the while, the hard work of hop breeding occurred in Corvallis, where Alfred Haunold and his colleagues planted thousands of crosses with hopes of achieving disease-resistant and high-yielding varieties that appealed to brewers. Haunold released the Cascade hop in 1972, while also testing new breeding methods, including polyploidy, or introducing multiple sets of chromosomes to diploid plants. Over the next three decades, his hop hybrids revived a struggling Willamette Valley industry. Before he retired in 1996, Haunold released two-dozen new hop varieties that became the foundation for a craft beer culture that emerged simultaneously with his successful career. He, and his colleagues in Corvallis and the USDA, along with hop farmers, hop dealers, and brewers big and small, all played vital roles in maintaining the Willamette Valley hop industry.

And in that way, the history should sound familiar: for the previous century and a half, a
similar group of individuals—spanning from Ezra Meeker and Emil Clemens Horst, to Arch Sloper and James Seavey, to Herman and Gayle Goschie—engaged in the collaborative work needed to sustain Oregon’s most important specialty crop.
Conclusion

**Oregon’s Hoptopia Elaborated**

In many ways, the trajectory of *Hoptopia* came full circle. The history started with a local desire for hops in beer-making in the 1860s, faced ups and downs in the following hundred years, and then revived once again with a local desire for hops by regional brewers in the 1980s. While one-fifth as productive at the turn-of-the-twenty-first century than as its heyday during the 1870s to the 1940s, success is evident on family farms and in beer brewed throughout the world. The narrative of the Willamette Valley hop industry continues to unfold.

In the first decade of the new millennium, Oregon growers cultivated an average of 5,000-6,000 acres of hops per year, producing between 8,000,000-11,000,000 pounds of the crop. The work occurred exclusively in the Willamette Valley and under the direction of fewer than thirty farming families working an average of fewer than 400 acres in hops. Oregon continued to take a backseat to their neighbors in Washington who grew more hops on larger scales. But because of evolving cultural techniques and the introduction of new hop varieties, Oregonians achieved higher yields per acre than they did fifty years prior. The state’s “horn of plenty” still produced a fifth of the world’s crop.¹

¹ Hop Growers of America, “2009 Statistical Report” (Moxee, WA: Hop Growers of America, Inc., 2010). Washington presents a different story. Is growers alone produce twenty-five percent of the world’s hop supply on over 20,000 acres—certainly making it the current “Hop Capital of the World.” Unlike Oregon, most of Washington has turned to corporate farming which largely takes place in the Yakima Valley on farms that are double, triple, or quadruple the size of the family growers in Oregon. Most Washington hop
A majority of the Oregon’s hop farmers are fourth and fifth generation, emphasizing the long-term family commitment to the industry. Many growers suggest that the family business is simply a way of life. Others suggest that no other type of farming can match hops because everything takes place on the farm itself, from the planting to the packaging and selling. Some also suggest that because of the industry, they feel connected to an international hop community that periodically invited their travel around the world to participate in international hop growing meetings. By meeting challenges and seeking new opportunities, particularly via Oregon Hop Commission and Hop Growers of America meetings, a sense of community surrounding the specialty crop has strengthened over the years.²

While hop growers make up a small portion of Oregon’s agricultural community and an infinitesimal part of the state’s population, their products touch the everyday lives of millions of American consumers. Whether beer drinkers or not, Americans are bombarded with advertisements such as Miller’s “tripled-hopped” beer or images of hop cones on the side of Budweiser cans. The craft beer movement has been more influential in creating a new awareness of hops. Even if they continue to represent less than five percent of the market share, craft beers from the vats of BridgePort, Widmer Brothers, and dozens of other Pacific Northwest brewers (and hundreds across the country) concerned with quality ingredients, flavor, and creativity in the beer-making process, have changed the way American consumers conceive of “the Wolf of the Willow.” This

² Herman and Vernice Goschie, interview by author, Goschie Farms, Inc., Silverton, Oregon, August 18, 2008; John Annen, interview by author, Annen Brothers Farm, Mt. Angel, Oregon, March 11, 2008.
is to say that in the same way that Americans became more aware of fine wine drinking in the latter part of the twentieth century, they found an interest in craft beers that feature hops prominently. Followers of the craft beer movement know of the veritable “hop wars” among brewers, or the seemingly unending quest to produce increasingly hopped up beers. Hop Henge (Deschutes Brewery), Hop Jack (Widmer Brother Brewery Company), and Hop Czar (BridgePort Brewing Company) represent just a few of the ales engaged in the war for beer connoisseur’s tastes. The hop rich beers feature hop plants prominently on their labels and other advertisements. The new emphasis has elevated the hop to star status among beer lovers and foodies.  

The expanding cultural fascination with craft beer and hops in the past thirty years brought a new kind of attention to the Willamette Valley’s farmers. Hop growers and brewers from around the world arrived in greater numbers each year for tours of hopyards and the region’s many breweries. Beer festivals abound and celebrate local hop production as a key to their existence. Amidst these developments, beer makers and hop growers have grown even closer. Rogue Brewery, of Newport, Oregon, recently purchased a famous working hopyard near Independence for use in the brewery, thus integrating the specialty agriculture directly into their operations. Deschutes Brewery, among many others, jumped on a trend in fresh-hopping beers, or brewing with freshly-picked hops rushed to the vat. A handful of growers have also obliged the craft beer industry’s request for organic hops, long seen as a difficulty given the plant’s susceptibility to pests and diseases. Success excited brewers and beer drinkers. Gayle

---

Goschie and her organic hops even became a marketing tool as Hopworks Urban Brewery began brewing batches of Gayle’s Pale Ale in 2010.⁴

In the midst of transformations in beer and marketing, hop agriculture continued to change. Hop farming continues to become more sophisticated. While most hops are grown by multigenerational farming families, the industry has become increasingly similar to grain or cotton agribusinesses. Farmers once monitored their crops manually. In the twenty-first century, computers account for water and soil levels and make adjustments for the growers as their programming informs them. The implementation of digital irrigation and fertilizer systems continues to change the industry as more growers adopt them. Hop growers also embrace the digital age, utilizing the Internet for marketing and sales.⁵

Yet much remained the same for hop farmers. Planting, growing, harvesting, and marketing the crop remained their annual concerns. Willamette Valley hop farmers continued to plant new rootstock in the spring, prune the initial shoots, and train the second growth to trellis wires. They still relied predominately on relationships with representatives of big beer companies to market and deliver their products. Some growers even see these representatives as extended family members, and take pleasure not only in the business relationships but friendships that have developed in the past half-century or more. The region’s hop growers have similar relationships with representatives of Barth,


⁵ John Annen, interview by author.
Steiner, Haas, and other larger hop distributors stationed in Salem, Portland, and surrounding areas that have much invested in ensuring brewers around the world have the zest of their brew. Some hop growers in Oregon and Washington, however, have developed their own cooperatives and distribution companies. Yakima Chief and HopUnion represent two of the most successful of these groups, and their headquarters in the Yakima Valley underlines the reality that the Evergreen State is now the center of hop growing in the United States. Still, the emergence of the independent distributor Indie Hops of Hubbard, Oregon in 2009—that caters specifically to craft brewers—shows that the Willamette Valley remains on the cutting edge of the hop industry. Indie Hops has taken a lead in promoting and providing specialty hops, including organic varieties from the Goschie and Coleman farms.6

Underscoring the rise of Indie Hops and the continued prominence of hop distribution companies large and small represents a major shift in how new hop varieties enter the marketplace. After the 1996 when Alfred Haunold retired from his position with the USDA in Corvallis, the federal government initiated a monumental shift in plant breeding by allowing plant patents. The shift changed the way that agricultural extension centers did business. Whereas the emphasis on programs like Haunold’s were once on breeding new varieties for public release to American farmers, the efforts ceased with private companies now patenting their own new hop varieties. The proprietary nature of hop breeding in the past two decades produced mixed results. The roles of Alfred

---

Haunold’s successor and other peers diminished, while the privatized nature of hop breeding created greater competition and a wider variety of hops available for brewers. The newest trend in hop breeding appeared with the “super hop,” or varieties that contain unforeseen amounts of alpha acids, the resins that provided bittering characteristics in beer and can be efficiently turned into extracts and pellets at cheaper rates. The names of these hops include Apollo, Zeus, and Millennium, emphasizing strength and superiority for marketing, opposed to Haunold’s hops that had regional names. The developments may concern Haunold and traditional hop breeders, but the new super hops also demonstrated how the hop industry continually seeks new science and technology along with agricultural practices.7

Other challenges in the hop industry span the world of environment and business that have always been present. Pests and disease are always problems. Downy mildew continues to plague growers, despite the proliferation of more resistant hop varieties. Another debilitating disease, powdery mildew, emerged in the U.S. in the early 1990s. The disease has been more of a problem for Yakima growers because it affects drier climates. But its presence still threatens Oregonians. Overproduction can also be a problem. In varying years, Pacific Northwest farmers grow fewer hops, adjusting to market demands and surplus. To the benefit of growers, the international aversion toward American hops declined in the past half century as quality controls and mechanical

---

harvesting allowed growers to sell highly rated crops. The availability of American hybrids also improved the reputation of the nation’s hops, initially the Cascade, followed by the hybrid noble varieties developed by Haunold in the decade before he retired. In the midst of overcoming old obstacles, Willamette Valley and other American hop growers have new concerns. In 2009, InBev, a Belgium corporation, purchased Anheuser-Busch, a major buyer of hops from the Pacific Northwest. Seeking cheaper supplies, InBev joined a trend of transnational brewing companies pursuing cheaper hops grown in China.8

These continued challenges forced Willamette Valley hop growers to adapt to changes in environment, economy, and culture. In 2009, the Hop Growers of America met to discuss the rebranding of their organization. They hired a public relations firm to design a new logo and change their website in the hopes of bringing recognition to the high valued hops under their cultivation. The decision echoed those made fifty years prior when Pacific Northwest growers confronted issues of decreased hopping ratios and competition with Europe in previous versions of the American Hop Growers Association and the Oregon Hop Commission. The decision harkened back to Ezra Meeker who penned Hop Culture in the United States in 1883 as a means to increase the quality and reputation of Pacific Coast hops. The Hop Growers of America, in collaboration with the various extension centers of the USDA in Oregon, Washington, and Idaho, have also invested heavily in finding new markets for hops outside of brewing. The most tantalizing and feasible appears to be the use of hops in animal feed. With rising health

---

8 Writers from across the business and beer spectrum have considered InBev’s takeover. For the most complete account, see: Julie MacIntosh, Dethroning the King: The Hostile Takeover of Anheuser-Busch, an American Icon (Hoboken, NJ: John Wiley & Sons, 2011).
concerns about industrialized meat production, scientists see the use of hops in animal feed as a means to provide organic, as opposed to synthetic, antibacterial agents.⁹

The Hoptopia Hypothesis Revisited

In *Sense of History* (2001), historian David Glassberg explains how human beings psychologically relate to the past via specific encounters with material places. “Sense of history,” he notes, “is akin to what environmental psychologists describe as sense of place—not quite territoriality, as among animals, but a sense of locatedness and belonging.” The ideas echo writings by Yi-fu Tuan and other cultural geographers in previous decades. As a historian, however, Glassberg values the temporal over the spatial. He continues, “A sense of history locates us in time, with knowledge that helps us gain a sense of when we are, filling in gaps in our personal recollection and family stories that allow us to understand our place in succession of past and future generations.”¹⁰ For Glassberg, the material landscape reigns as an essential storehouse for the memories of the past. Museums and war memorials are common places for the preservation of the past for people to access. But so, too, are community centers, schools, or farming landscapes. The *Hoptopia* hypothesis and history presented in this project developed with these ideas in mind. The study of hop and beer production in the rural and urban landscapes of the Willamette Valley offers examples of the interaction of people, an agricultural industry,

---


and a place now inhabited by approximately three million people. The interaction shows how that place historically connects to environments and cultures across the planet.\textsuperscript{11}

One of the central facets of Hoptopia’s history is continuity. The story started with the fact that hops are central to \textit{the botany of desire}—a plant that humans have continually demanded for beer-making over the past several hundred years.\textsuperscript{12} Four centuries before the Willamette Valley hop industry prospered, earlier American settlers brought the crop across the Atlantic, only later traveling to the Far West with hops in the mid- to late-nineteenth century. The specialty agriculture would not have succeeded without the climate’s natural rainfall, the soil, and outbound transportation capabilities offered by the remote but accessible geography of the Pacific Northwest. Subsequently, if not for the changing American and global economies during that period and technological change that allowed West Coast farmers to sell their crops around the world, the crop might not have achieved success. Perhaps it also would not have succeeded without the sensibilities and drive of Ezra Meeker and other early Pacific Coast hop growers, and later with transnational beer and hop companies and USDA scientists.

Hops never enveloped the Willamette Valley landscape as tobacco and cotton dominated much of the American South in previous centuries or grains on the Great Plains. “The Wolf of the Willow” has always been a specialty crop, produced with the nearly exclusive purpose of beer-making in the past 150 years. But over time, financial and cultural reasons made hops the region’s most important specialty crop. In the


nineteenth century, the hop crop played a significant role in the description of the regional identity as an agricultural utopia and offered farmers a vital source of cash income. In the twentieth century, growers and dealers increased business practices and scientific and marketing research that carried the industry through the difficulties of Prohibition and the outbreak of downy mildew. The story of labor added another critical element to the history of Hoptopia, with peoples of different races, classes, genders, and ages finding varied meanings in the yearly harvest. Prohibition, world wars, and the “bland” postwar period threatened to devastate the Willamette Valley hop industry, but earlier foundations in science and marketing, along with the resolve of the members of the agricultural and brewing communities, allowed hop culture to grow and change.

The other central facet of Hoptopia’s history is visibility, a botanical and cultural attribute not evident in any other crop because of the regional and international affection for beer. The visible recognition begins on the farm. Hop plants grow higher than any other crop not grown on trees and mark a curiosity on the agricultural landscape. Hops also have a singular purpose in beer-making, offering the spice and zest to one of the world’s most popular beverages and, as such, advertisements carried the cone figures around the world. That the Willamette Valley was once the center of world hop production and maintains an important presence locally and globally in agriculture and beer in the early twenty-first century. Hops are not the only specialty crop grown in the Willamette Valley. In fact, the crop is just one of hundreds. Some scholars might argue that grass seed has historically been the “horn of plenty’s” most important specialty crop, reaching a peak in 2010, when South African officials imported Oregon grasses for use in the soccer turf of the World Cup. There are other specialty crops, including figs,
hazelnuts, and raspberries that Willamette Valley residents have grown abundantly and celebrated at different points in the past. From the 1970s onward, the valley’s viticulture also brought attention to the region, winning international awards for its pinot grigio. And one must not forget wheat, the staple crop that Euroamerican farmers first relied on in the nineteenth century and have continued to rely on. For the most part, historian William Robbins correctly assessed wheat as an early metaphor for success in the Willamette Valley and its important role in world markets. Yet, by the late nineteenth century, Pacific Northwest farmers saw the success of specialty crops. The hop was chief among them.\footnote{William G. Robbins, \textit{Landscapes of Promise: The Oregon Story, 1800-1940} (Seattle: University of Washington Press, 1997), 98; Paul Pintarich, \textit{The Boys Up North: Dick Erath and the Early Oregon Winemakers} (Portland: Graphic Arts Center Pub Co, 1997); James Mayer, “Corvallis Firm Supplies Grass for World Cup,” oregonlive.com, accessed November 4, 2011, last modified May 27, 2010, http://www.oregonlive.com/business/index.ssf/2010/05/corvallis_firm_supplies_grass.html.}

Of all the region’s specialty crops, hops offer a success story that blends representations of the “locatedness” of place in the Willamette Valley more than wheat or any other specialty crop. The plant’s distinct visibility stands out in the agricultural landscape and its vital role in beer production makes it stand out in urban places. More so than any other crop, hops offer a strong link that unites the Willamette Valley’s agricultural past and present with environmental, economic, and cultural aspects of rural and urban production and consumption. The crop is grown relatively few places in the world on a commercial scale, and the continuity of its importance and visibility as a specialty crop used in beer makes it a valuable symbol of rural and urban endeavors over time. Hop history yields a sense of a rich past for the Willamette Valley and is a major constituent in its “sense of place.” For the hop was not only an ongoing visible sign of
agricultural success in the region, but also thrived on it outlets for its processing and marketing in Portland and other surrounding cities—an absolute necessity for a successful agricultural crop.

In the twenty-first century, many vestiges of hop agriculture have vanished. The region no longer has 1,500 individual family hop growers, nor the hundreds of hop driers that dotted the landscape in the “golden era” of Willamette Valley hop production. But hops on high wire trellises, a curiosity among the orchards and fields, remain. They are present along the winding country roads of Marion County, near Silverton, Mount Angel, Aurora, St. Paul, and Independence. A mid-September driver on the roads has a good possibility of following behind a large truck transporting the vines cut from the trellis to the mechanical harvester elsewhere down the road. The plant and its harvest are reminders of an earlier era. So too are encounters with Budweiser cans and BridgePort IPA bottles that have hops on the side, or the name Hopworks Urban Brewing, one of Portland’s most popular brewpubs in the early twenty-first century. These are physical reminders, as Glassberg suggests, of “our place in succession of past and future generations.” They are avenues to understand environments and peoples, economy and science. These are avenues to the past, to what was and has been an agricultural utopia for the past century and a half, one that combines the imperative knowledge of local environment and peoples and goods from around the world.

The agricultural history of hops offers a way to conceive of or construct the place of the Willamette Valley over time. The continuity in agriculture, science, and community offers a way to understand the region’s local and global connections from the past 150 years. Hops connected and connect the soil, climate, and labor of the valleys of
the Pacific Northwest to the rest of the world as do other endeavors, and by the late twentieth century became a visible shining star for brewers large and small evident in advertisements and craft beer hopping ratios. This is all to say that the contents of pint glasses in Oregon, the Pacific Coast, and all edges of the planet, have a richer history in which the Willamette Valley plays no small part.
Bibliography

Unpublished Material

Manuscript and Photographic Material


Extension Station Communications. Photograph Group 120. University Archives, Oregon State University Library. Corvallis, Oregon.


Manuscript and Photograph Collection. Old Aurora Colony Museum. Aurora, Oregon.


Records of the Agricultural Experiment Station. Record Group 25. University Archives, Oregon State University Library. Corvallis, Oregon.

Oral Histories

Evans, Gale. Oral history by Daniel C. Robertson, Benton Country Historical Society,
Philomath, Oregon, April 7, 1982.


---

**Theses and Dissertations**


Interviews

Annen, John. Interview by author, Mt. Angel, Oregon, 2008.


Published Material

Government Publications


Oregon State University. Agricultural Experiment Station. College of Agricultural Sciences. 100 Years of Progress: The Oregon Agricultural Experiment Station Oregon State University, 1888-1988. Corvallis, Oregon: Oregon Agricultural Experiment Station, College of Agricultural Sciences, Oregon State University, 1990.


*Books*


Conkin, Paul K. *A Revolution Down on the Farm: The Transformation of American


Hallberg, Milton C. *Economic Trends in U.S. Agriculture and Food Systems Since World


Hosmer, Brian and Colleen O’Neil (eds). Foreword by Donald L. Fixico. *Native Pathways: American Indian Culture and Economic Development in the Twentieth*


Mott, C. W. *All About Fruit and Hop Raising, Dairying and General Farming, Lumbering, Fishing And Mining In Western Washington*. St. Paul, Minnesota: C. W. Mott, General Emigration Agent, 1907.


The Northern Pacific Railroad. *The Northern Pacific Railroad: Sketch of Its History; Delineations of Its Transcontinental Line; Its Features as a Great Through Route From the Great Lakes to the Pacific Ocean; Its Relations to the Chief Water Ways of the Continent; and, A Description of the Soils and Climates of the Region’s Traversed By It as to Their Adaptability to Agricultural Production; With Descriptive and Statistical Exhibits of the Counties on and Near Its Line in Minnesota and Dakota (For the Information of Those Seeking New Homes and Profitable Investments)*. Chicago: Rand, McNally and Company, 1882.


Philips, Sara T. *This Land, This Nation: Conservation, Rural America and the New Deal*. Cambridge: Cambridge University Press, 2007.


Sosnowski, Vivienne. *When the Rivers Ran Red: An Amazing Story of Courage and*


Tuan, Yi-Fu. Topophilia: A Study of Environmental Perception, Attitudes, and Values.


Articles


McKay, Floyd J. “Green Beans, Green Cash: Alderman’s Post World War II Teenage Workforce.” *Oregon Historical Quarterly* 11, no. 3 (Fall 2010): 372-386.


Postman, J., K. Hummer, E. Stover, R. Krueger, P. Forsline, L. J. Grauke, F. Zee, B.


“Three Weeks With the Hop-Pickers.” *Littell’s Living Age* (Fifth Series) 20, no. 1750 (December 29, 1877): 789-798.


**Newspapers, Trade Journals, and Magazines**

*The American Magazine or Frank Leslie’s Popular Monthly*

*Benton Country Herald*

*The Capital Press*

*Country Life in America*

*The Enterprise File*

*Eugene City Herald*

*The Hop Press: A Memorandum of What’s Brewin’*

*Hop Report*
The Hopper

Hop Stocks

The Independence Enterprise

John. & Sohn. Hop Report

London Times

The Oregonian

Oregon Business Journal

The Oregon State Journal

The Overland Monthly

The New York Times

The Pacific Rural Press

The Tacoma Ledger

Transactions of the American Brewing Institute

The West Shore

The Willamette Week